

Schematic Package Supplement to

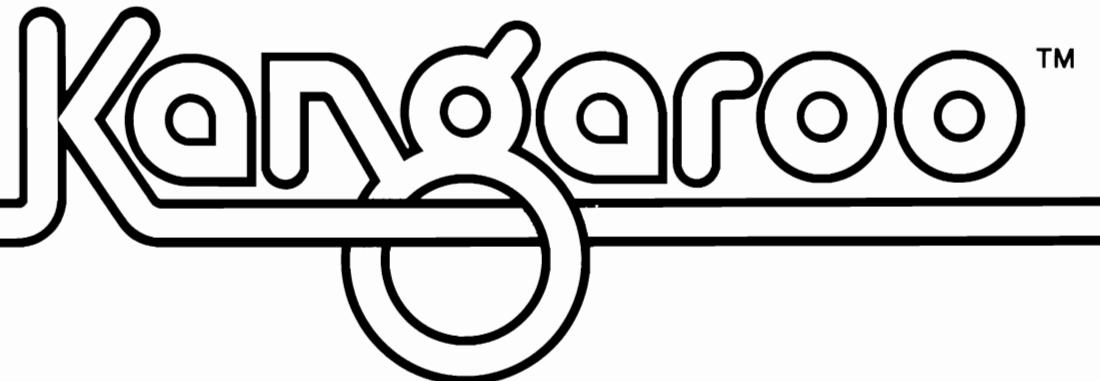


Table of Contents

- Sheet 1A You Are Here
- Sheet 1B Upright Kangaroo Game Wiring Diagram (038577-01 A)
- Sheet 2A Ireland-Built Kangaroo Game Wiring Diagram (038451-01 A)
- Sheet 2B Color Raster-Scan Power Supply Wiring Diagram (037669-01 C)
- Sheet 3A Regulator/Audio II PCB Schematic Diagram (035435-06 B)
- Sheet 3B Coin Door Wiring Diagram (037542-01 B), Utility Panel Wiring Diagram (038004-01 B),
Fluorescent Light and Speaker Wiring Diagram (035833-01 A)

Central Processing Unit (CPU) PCB Schematics (038469-01 A), Sheets 4A-7A

- Sheet 4A Block Diagram
- Sheet 4B Memory Map, CPU Power Input
- Sheet 5A Game Microprocessor, Address Decoder
- Sheet 5B Program ROM, RAM
- Sheet 6A Inputs, Outputs
- Sheet 6B Sound Microprocessor, Address Decoder
- Sheet 7A Custom Microcomputer

Video PCB Schematics (038468-01 A), Sheets 7B-11B

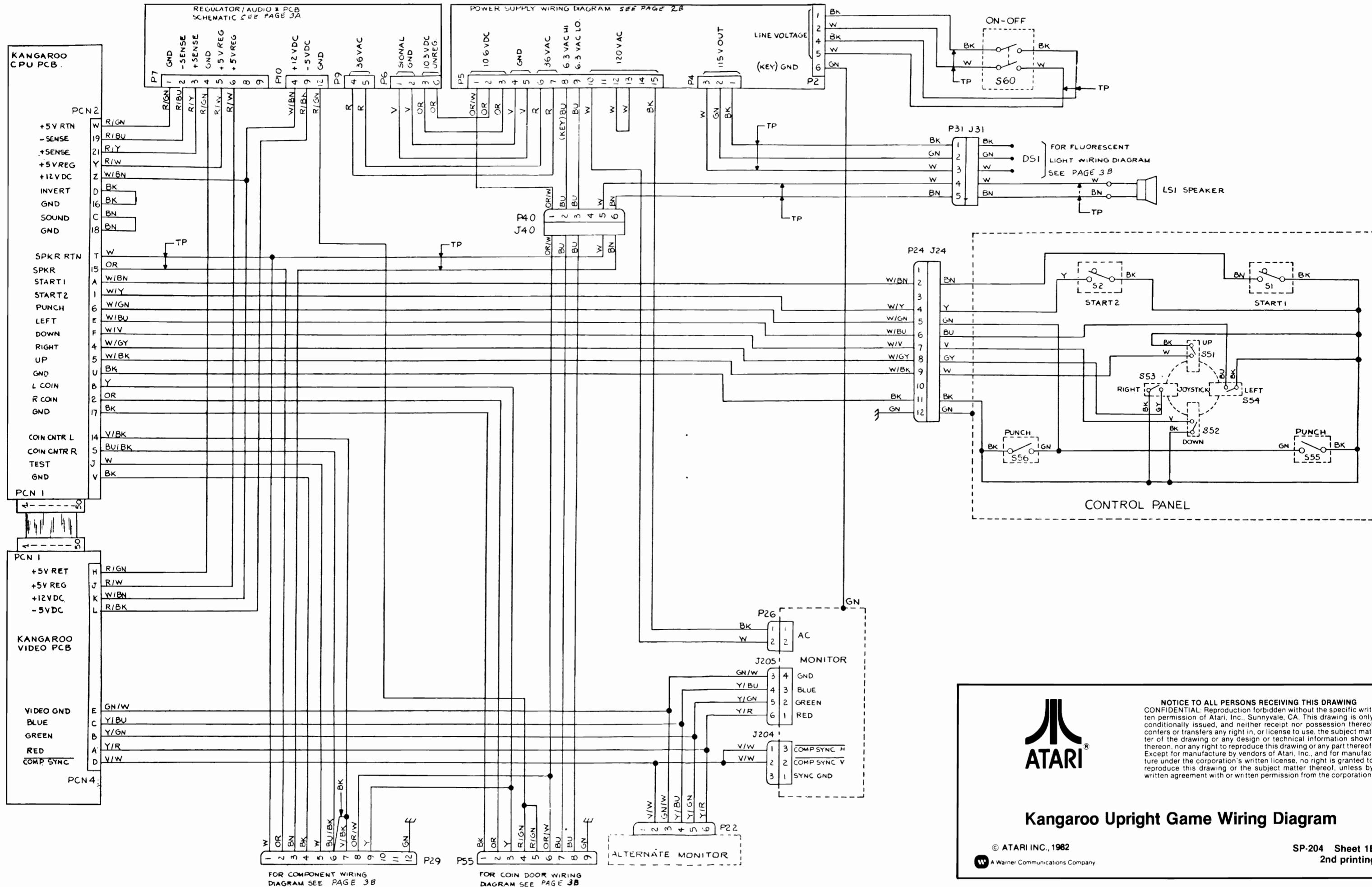
- Sheet 7B Block Diagram
- Sheet 8A Dynamic RAM Timing Diagram, Video Power Input
- Sheet 8B Clock, Sync Chain and Timing Signals, Dynamic RAM Control, Address Decoding
- Sheet 9A DMA Control, Dynamic RAM Video Address and Flip
- Sheet 9B Picture ROM Address Selector, Picture ROM
- Sheet 10A Dynamic RAM Address from CPU and for DMA
- Sheet 10B Dynamic RAM Data Selector, Address Selector, and Control Latches
- Sheet 11A Playfield (Dynamic RAM A)
- Sheet 11B Motion Object (Dynamic RAM B), Video Output
- Sheet 12A Electrohome 19-Inch Color Raster-Scan Video Display Schematic Diagram

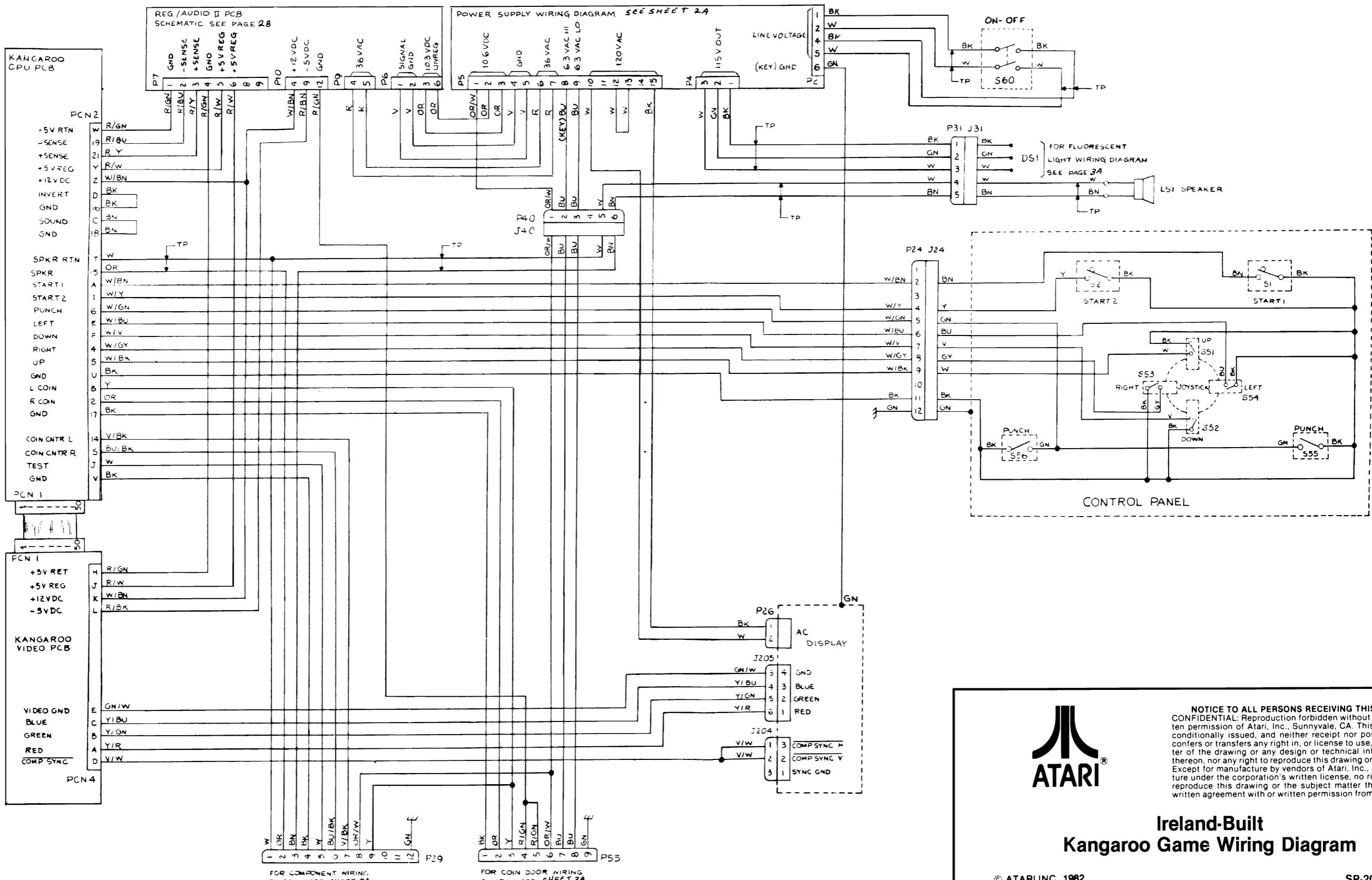
Operation, Maintenance and Service Manual

NOTE
This staple temporarily holds the schematic package together. Remove the staple before using the schematics.



A Warner Communications Company

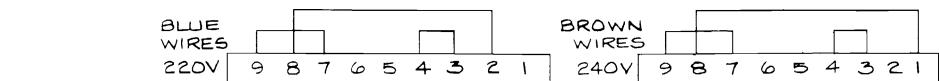




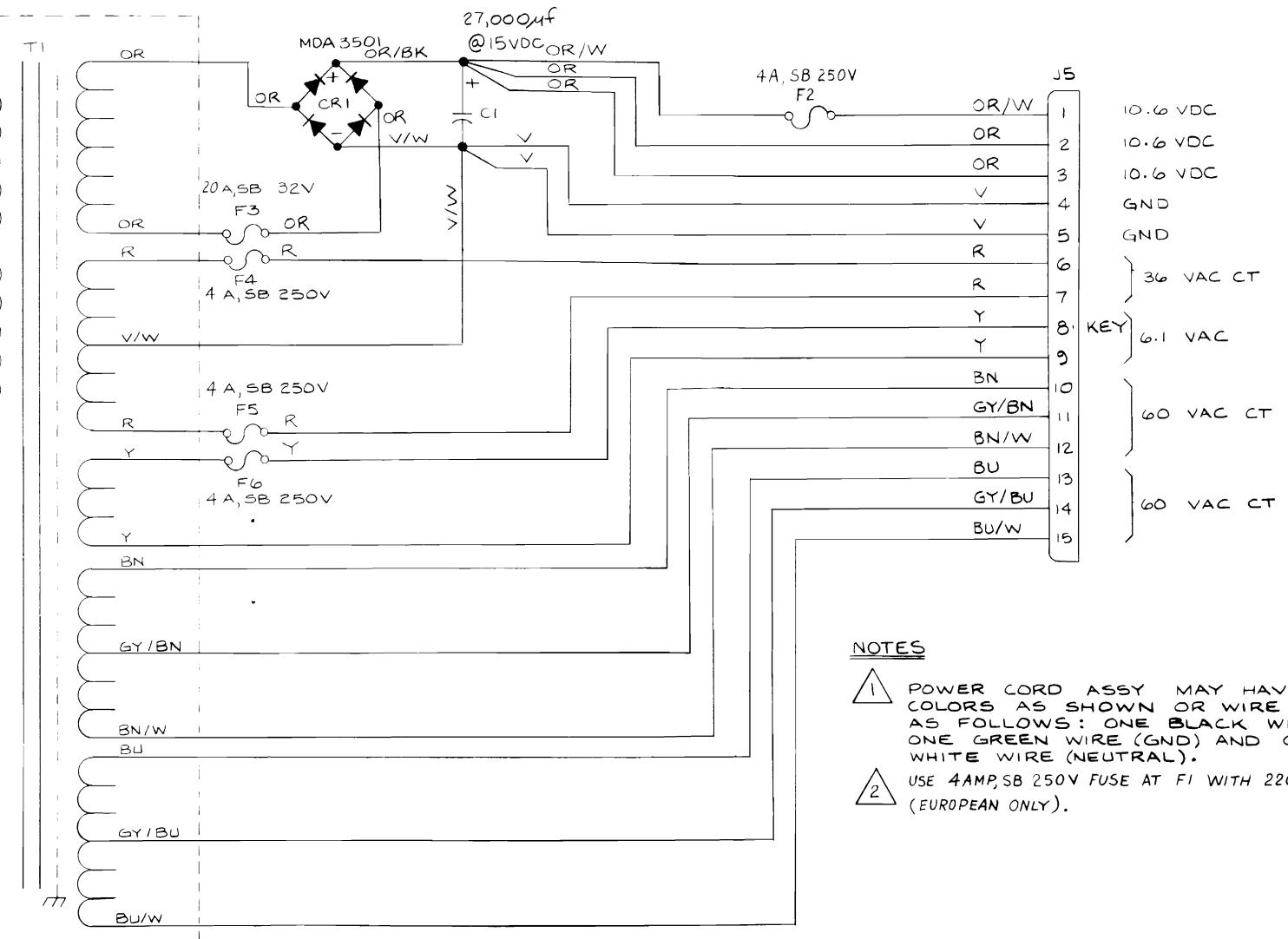
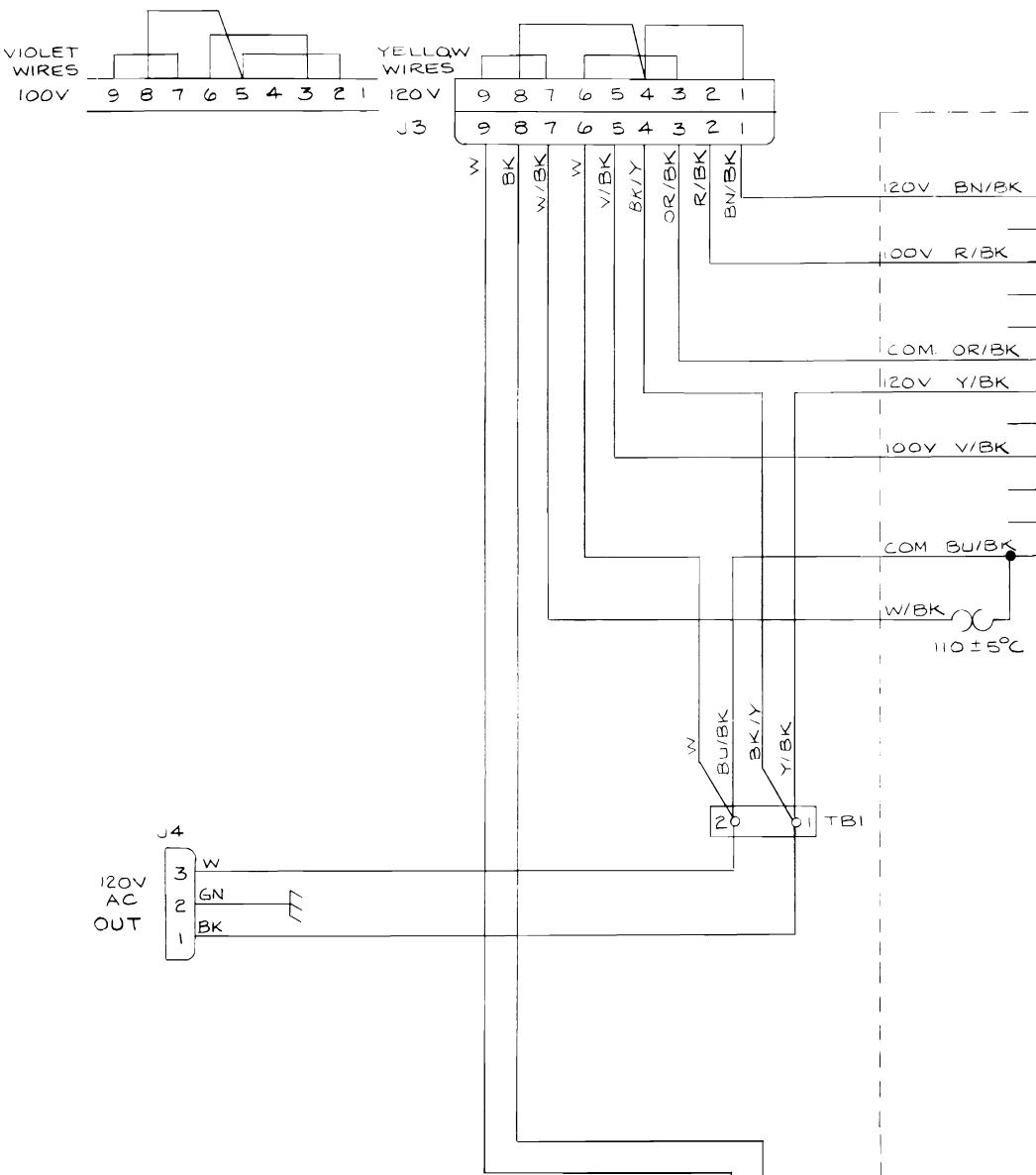
Ireland-Built Kangaroo Game Wiring Diagram

© ATARI INC., 1982

A Warner Communications Company

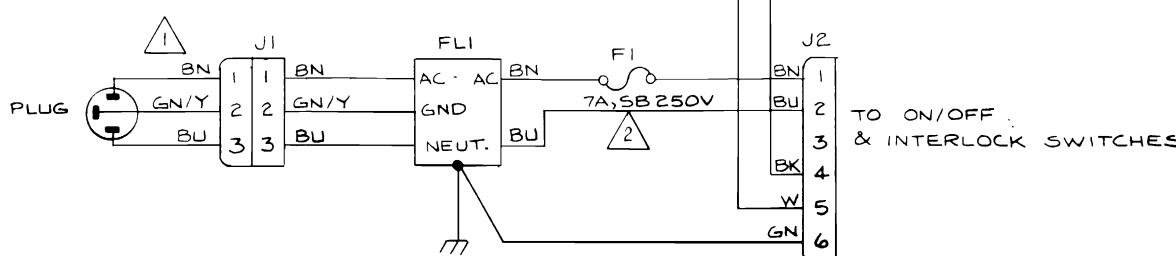


VOLTAGE SELECTION BLOCKS



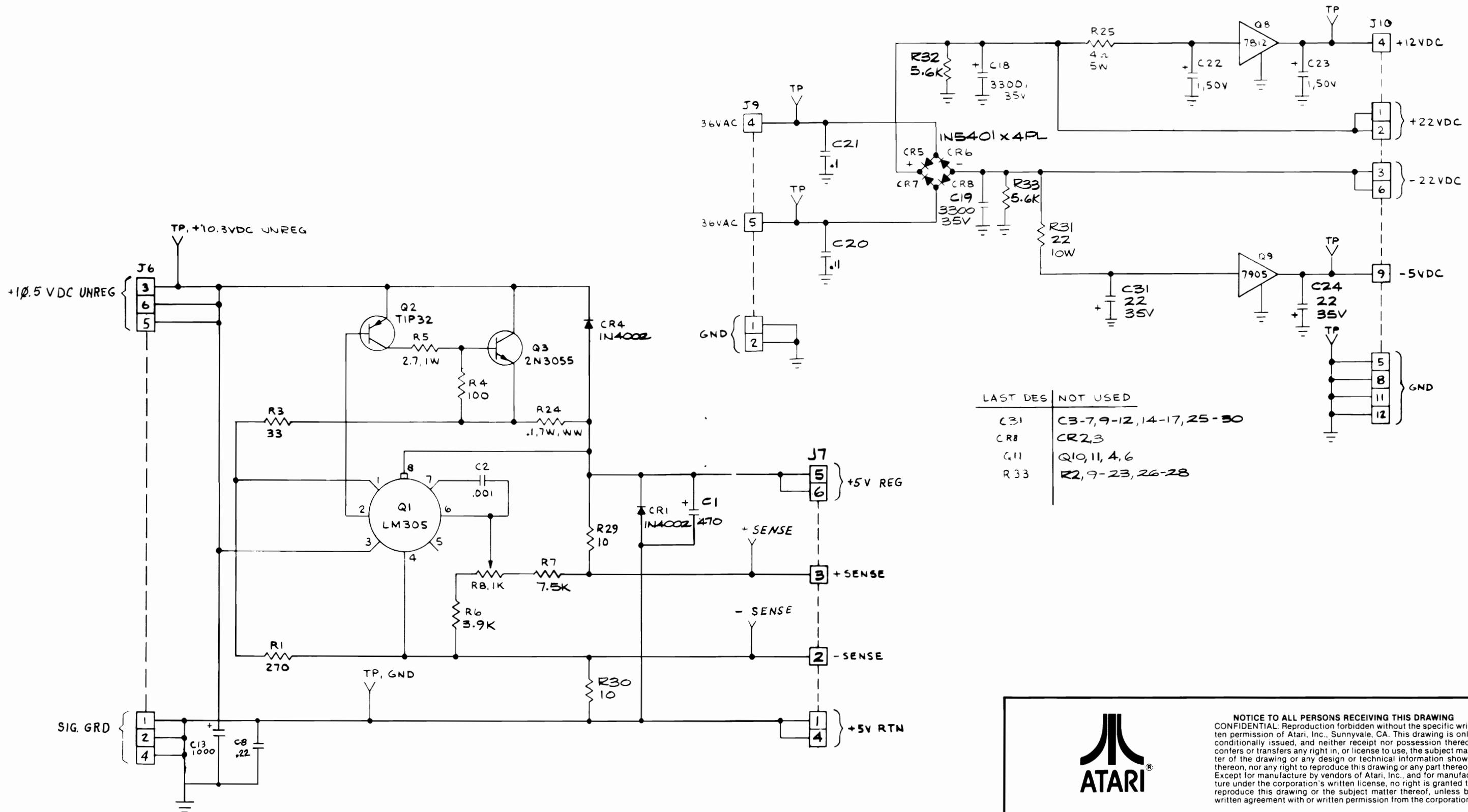
NOTES

- 1** POWER CORD ASSY MAY HAVE WIRE COLORS AS SHOWN OR WIRE COLORS AS FOLLOWS: ONE BLACK WIRE (AC), ONE GREEN WIRE (GND) AND ONE WHITE WIRE (NEUTRAL).
- 2** USE 4AMP,SB 250V FUSE AT F1 WITH 220V & 240V (EUROPEAN ONLY).



NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo Power Supply



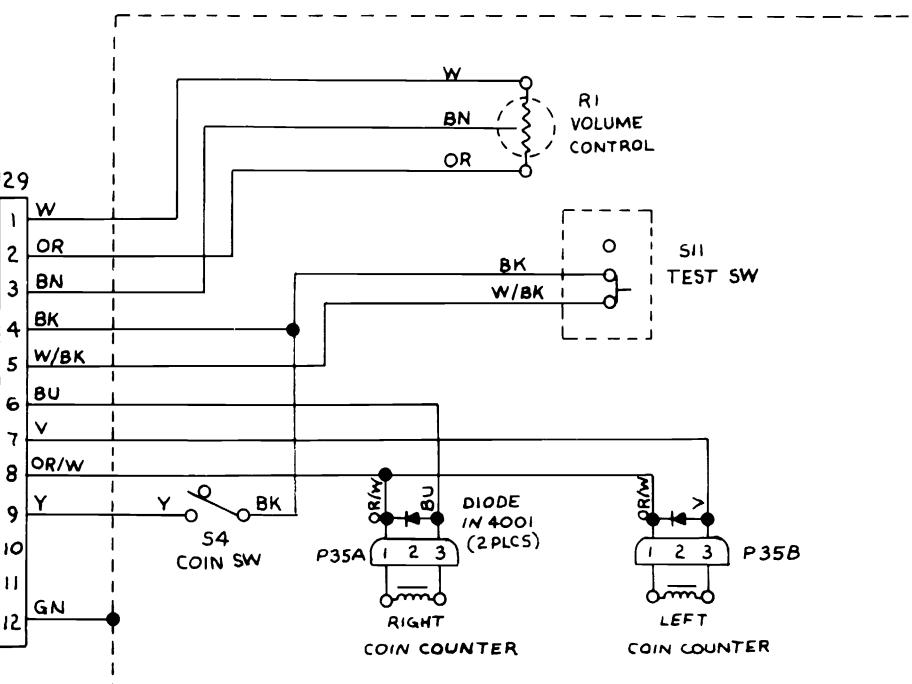
NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo Reg./Audio II PCB Schematic Diagram

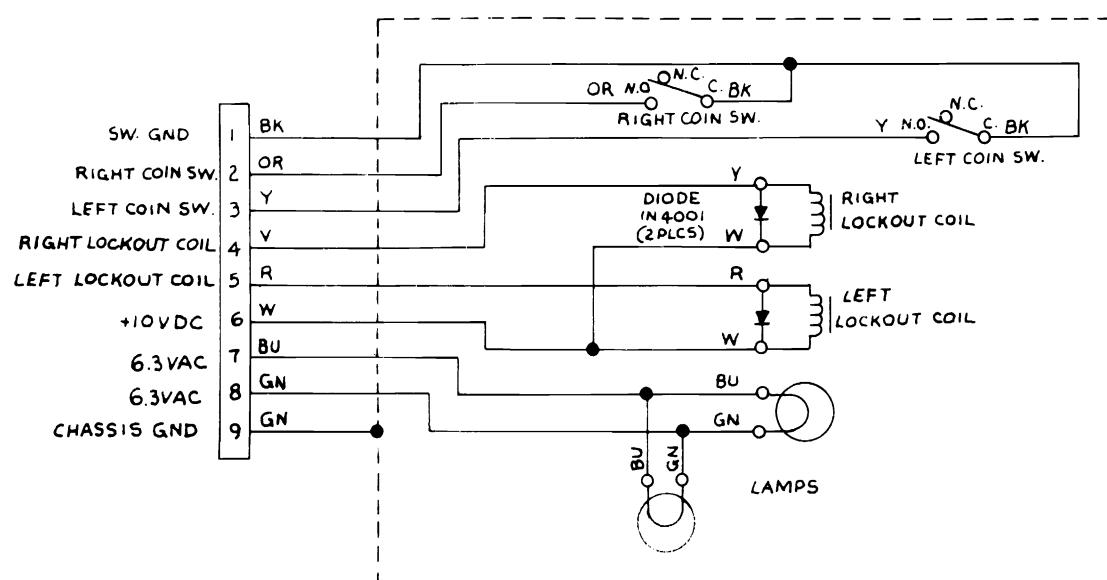
© ATARI INC., 1982

 A Warner Communications Company

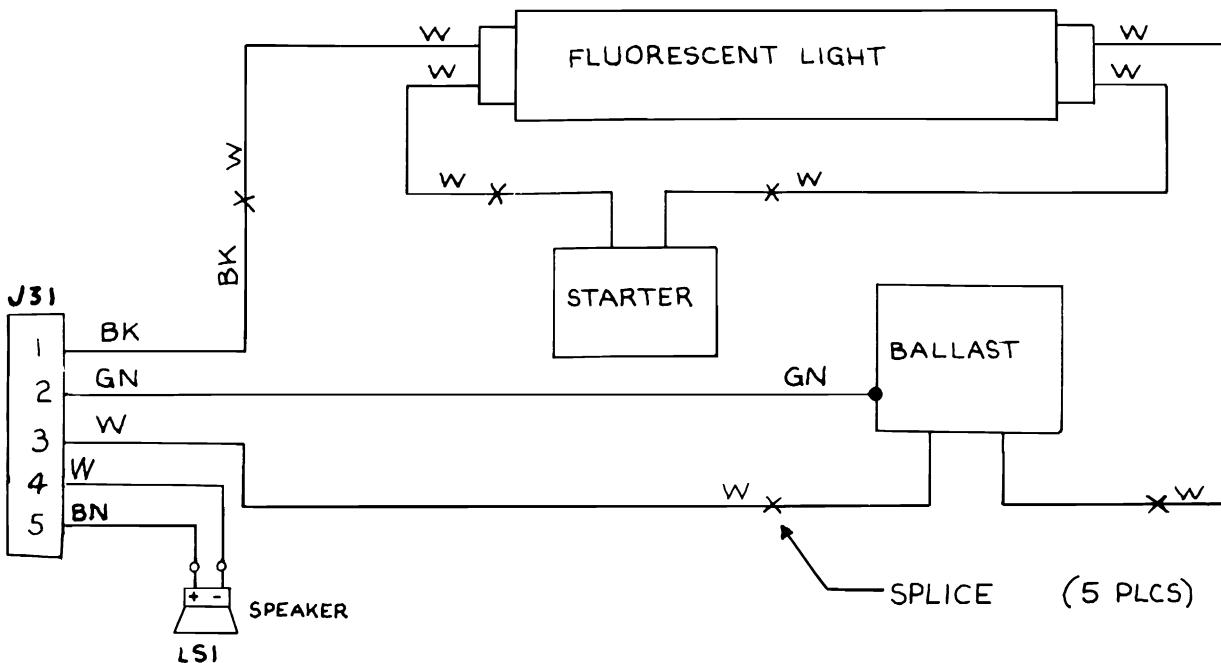
Utility Panel Wiring Diagram



Coin Door Wiring Diagram



Fluorescent Light and Speaker Wiring Diagram



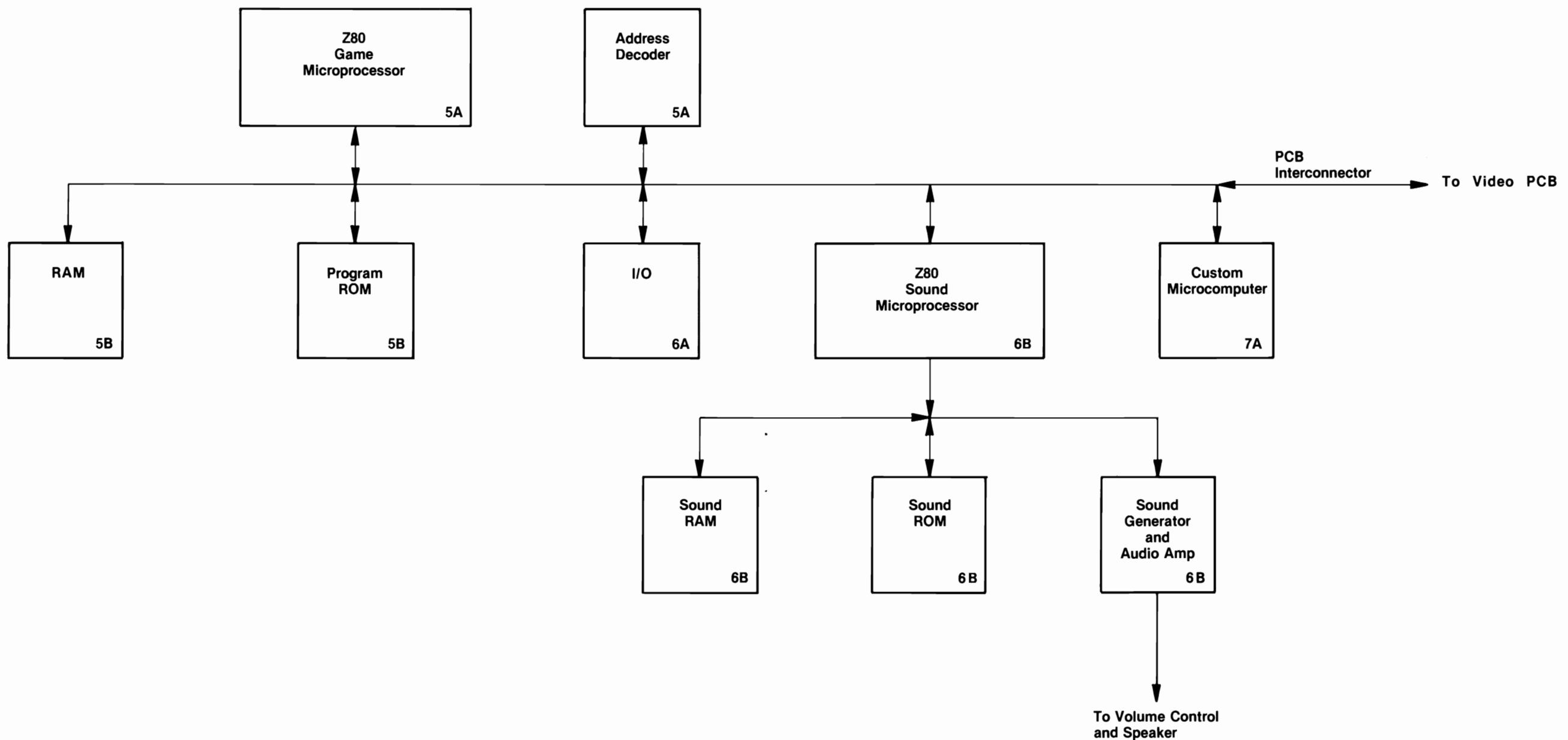
NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



Kangaroo Game Wiring Interfaces

NOTE

The service switch, located on the CPU PCB, allows you to enter credits without tripping the coin counter.

Block Diagram (CPU PCB)

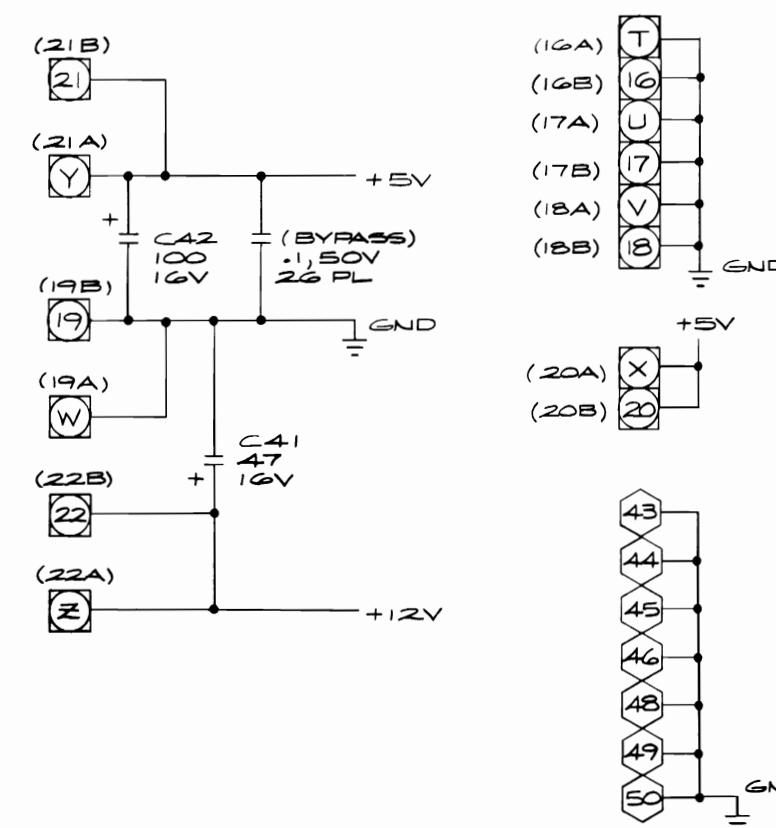
NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo CPU PCB Schematic Diagram

Memory Map

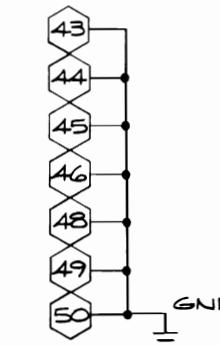
HEXA-DECIMAL ADDRESS	R/W	DATA D7 D6 D5 D4 D3 D2 D1 D0	FUNCTION
Game Microprocessor Memory Space (IC15)			
0000-5FFF	R	D D D D D D D D	Z80 24K Program ROM
E000-E3FF	R/W	D D D D D D D D	1K Working RAM
E400	R	D D D D D D D D	Option Switch
E800	W	D D D D D D D D	Low Byte [Start Address of Data in Picture
E801	W	D D D D D D D D	High Byte] ROM for DMA
E802	W	D D D D D D D D	Low Byte [Start Address in Bit Map RAM (where
E803	W	D D D D D D D D	High Byte] picture is to be written) During DMA
E804	W	D D D D D D D D	Low Byte [Picture Size for DMA
E805	W	D D D D D D D D	High Byte] and DMA Start
E806	W	D D D D D D D D	Vertical Start Address in Bit Map
E807	W	D D D D D D D D	Horizontal Start Address in Bit Map
E808	W	D D D D D D D D	Bank Select Latch
E809	W	D D D D D D D D	A & B Bit Map Control Latch (A = playfield, B = motion)
E80A	W	D D D D D D D D	Color-Shading Latch
EC00	W	D D D D D D D D	Sound DATA to Sound Microprocessor
EC00	R	D	Utility Coin Switch
EC00	R	D	1 Player Start
EC00	R	D	2 Player Start
EC00	R	D	Left Coin Input
EC00	R	D	Right Coin Input
ED00	W	D	Coin Counter 1
ED00	W	D	Coin Counter 2 (European games)
ED00	R	D D	Player 1 Right
ED00	R	D D	Player 1 Left
ED00	R	D D	Player 1 Up
ED00	R	D D	Player 1 Down
ED00	R	D D	Player 1 Punch
EE00	R	D	Player 2 Right
EE00	R	D	Player 2 Left
EE00	R	D	Player 2 Up
EE00	R	D	Player 2 Down
EE00	R	D	Player 2 Punch
EFXX	W	D D D D	Output to Custom Microcomputer
EFXX	R	D D D D	Input from Custom Microcomputer
Sound Microprocessor Memory Space (IC34)			
0000-0FFF	R	D D D D D D D D	4K Program ROM
4000-43FF	R/W	D D D D D D D D	1K Working RAM
6000	R	D D D D D D D D	Read DATA from Game Microprocessor
7000	W	D D D D D D D D	Write to Sound Chip (GI-AY-3-8910)
8000	R	D D D D D D D D	Read from Sound Chip

CPU Power Input



NOTES:

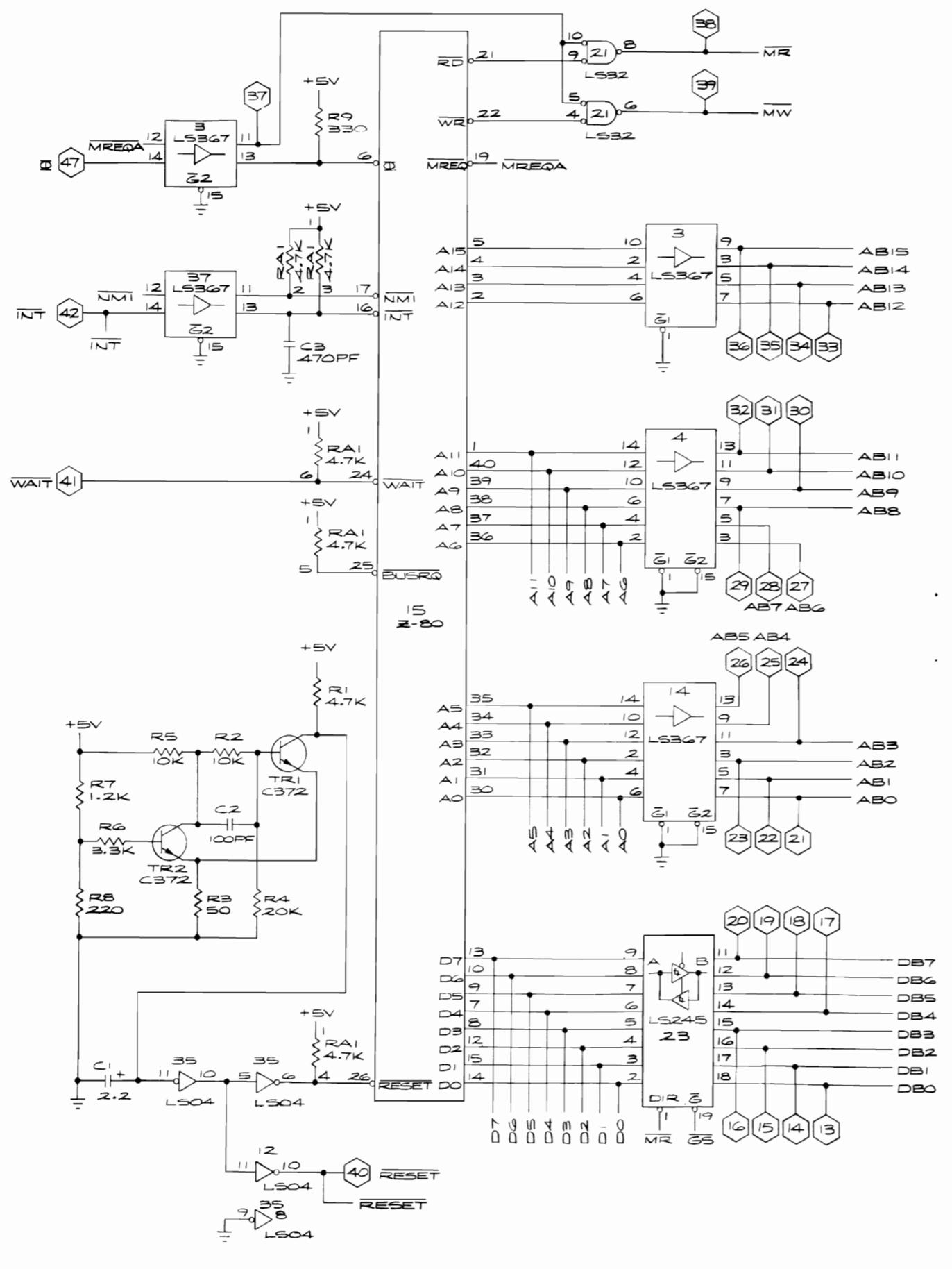
1. □ = CONNECTOR CN2
2. △ = CONNECTOR CN1



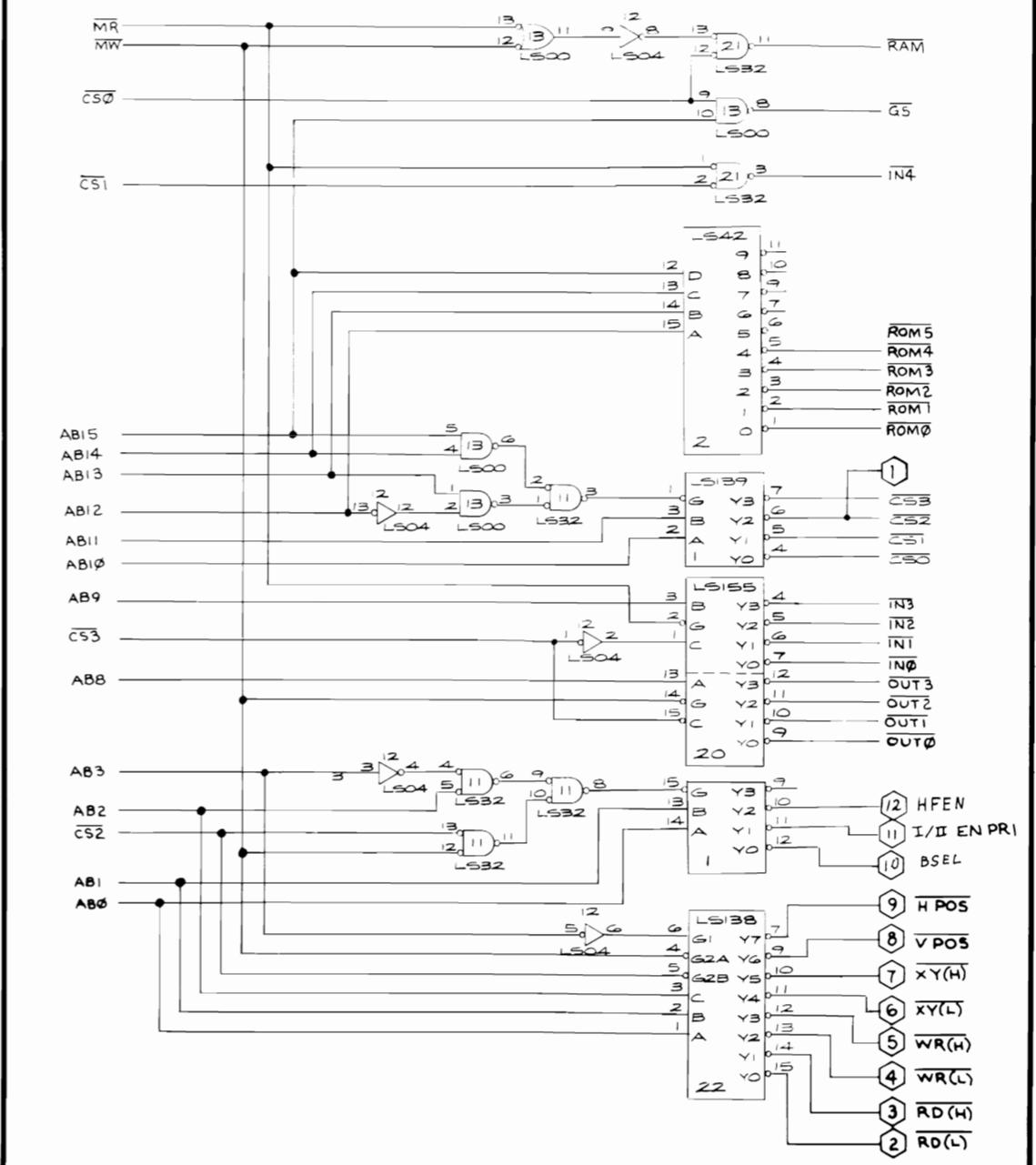
NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo CPU PCB Schematic Diagram

Game Microprocessor



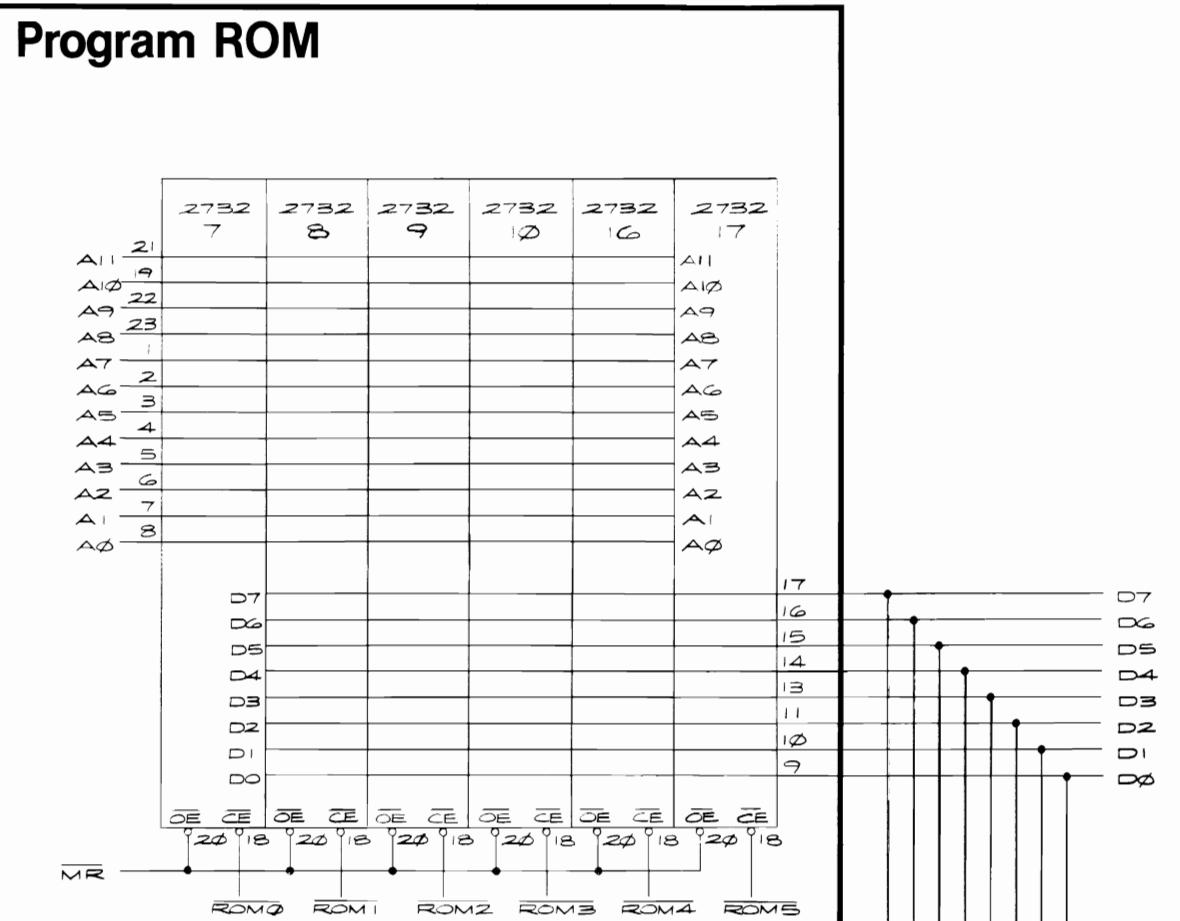
Address Decoder



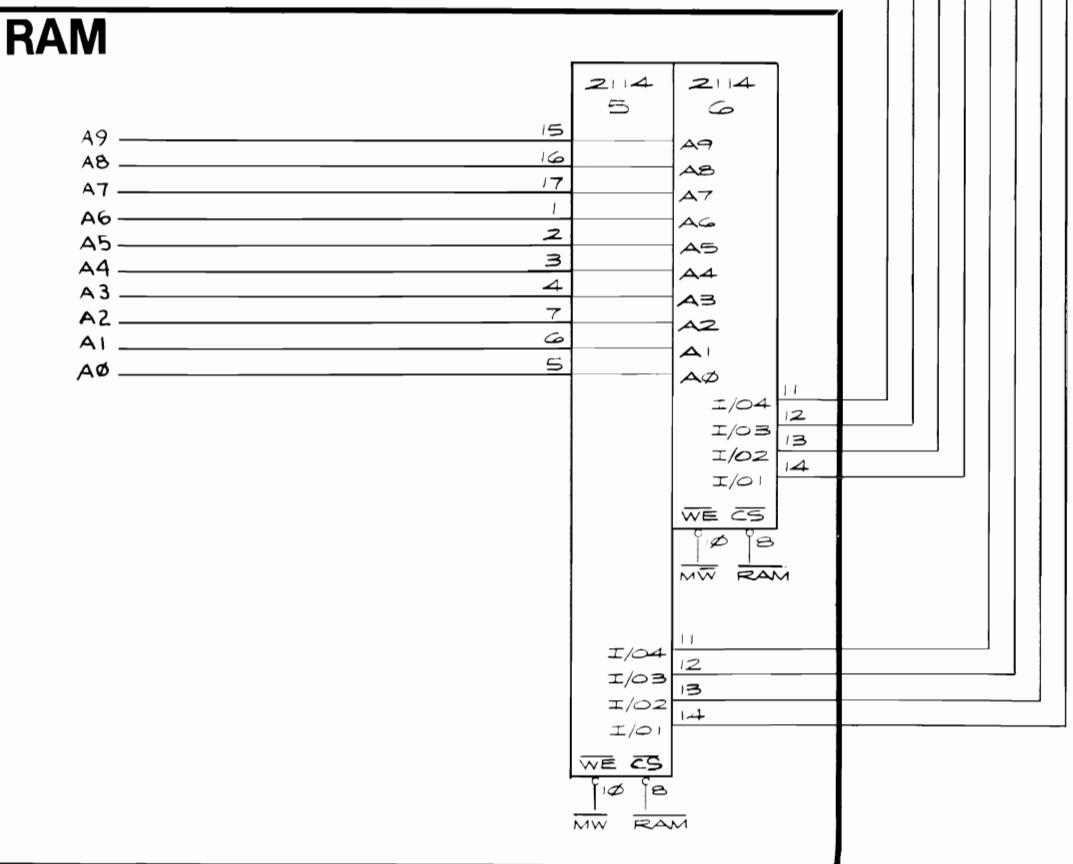
NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo CPU PCB Schematic Diagram

Program ROM



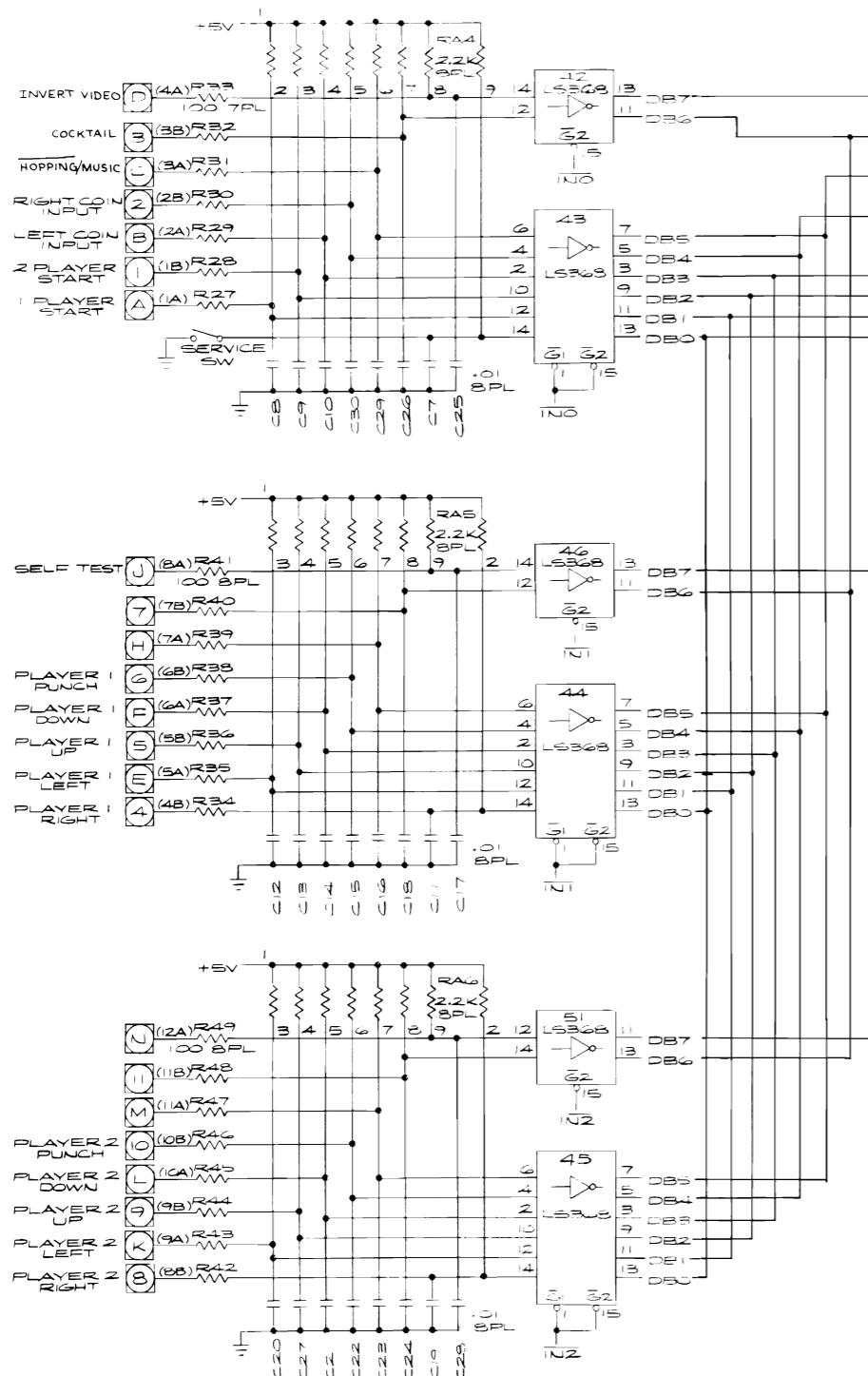
RAM



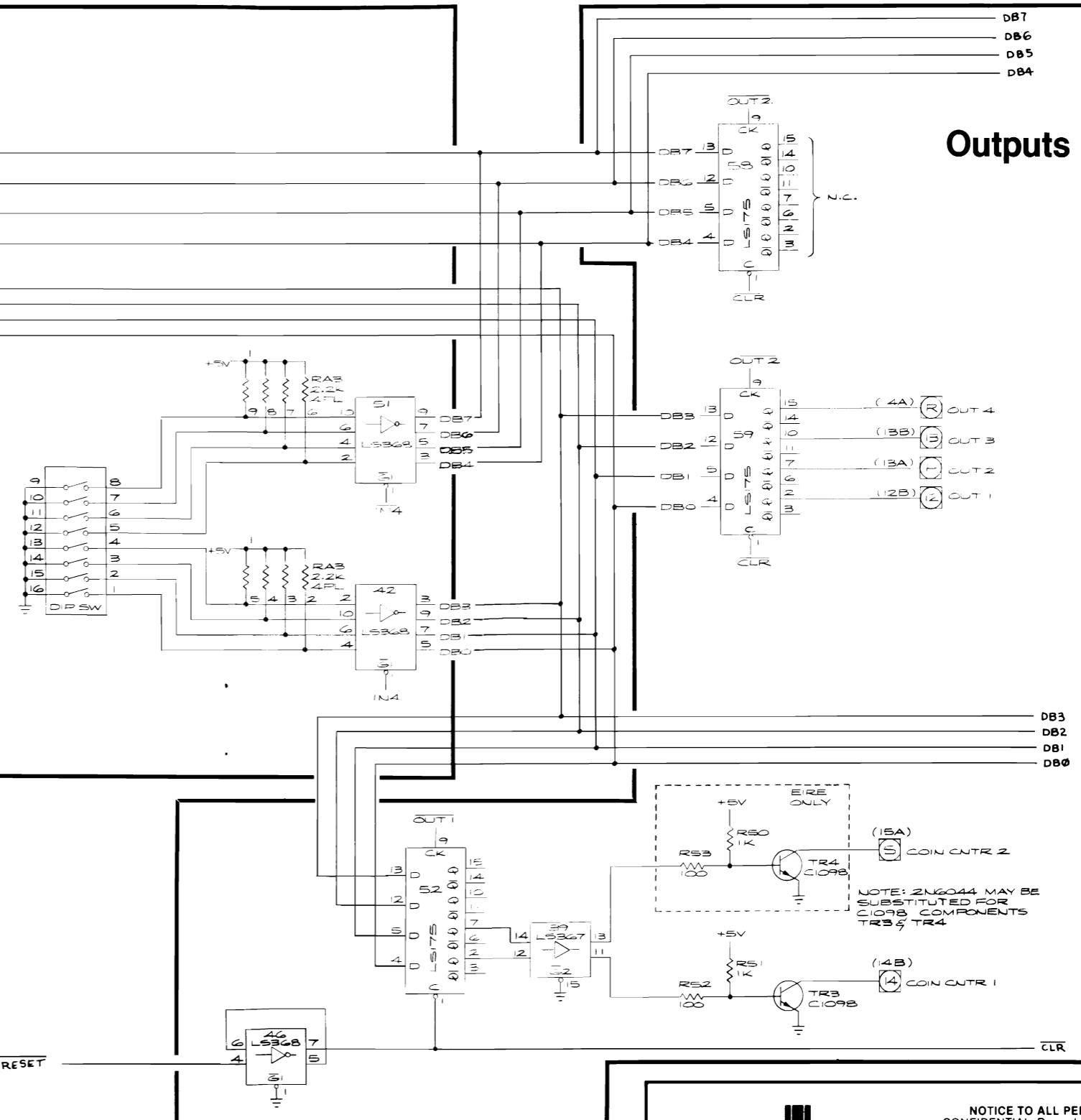
NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo CPU PCB Schematic Diagram

Inputs



Outputs

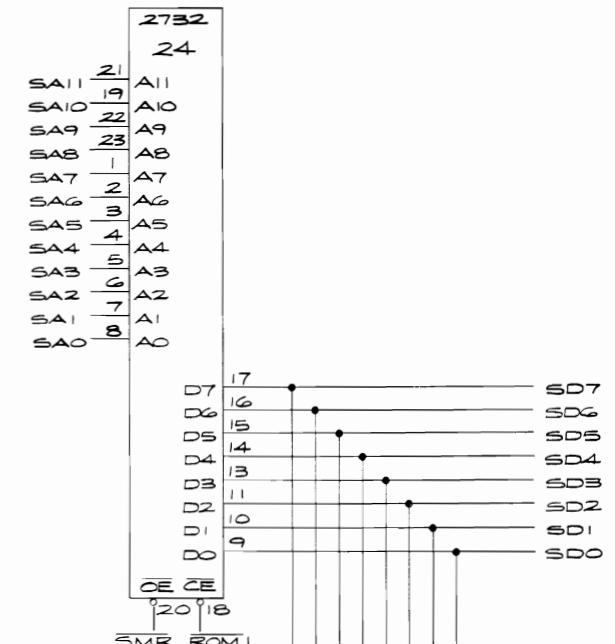
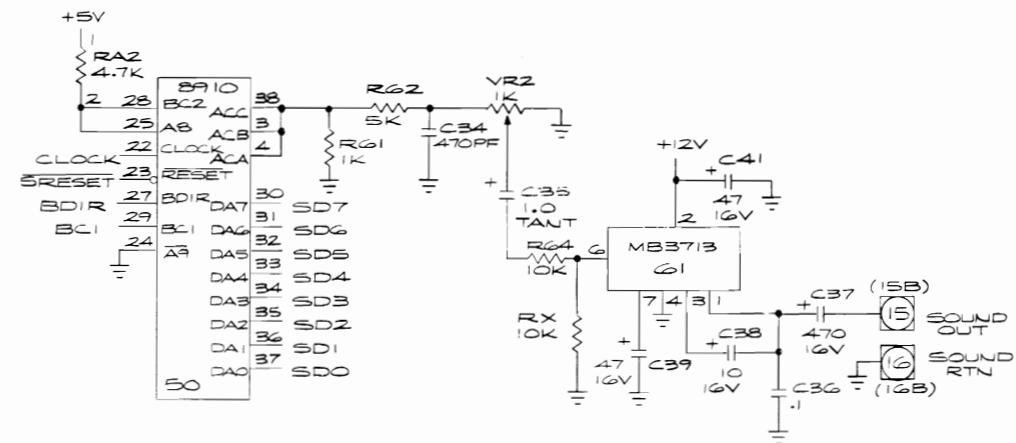
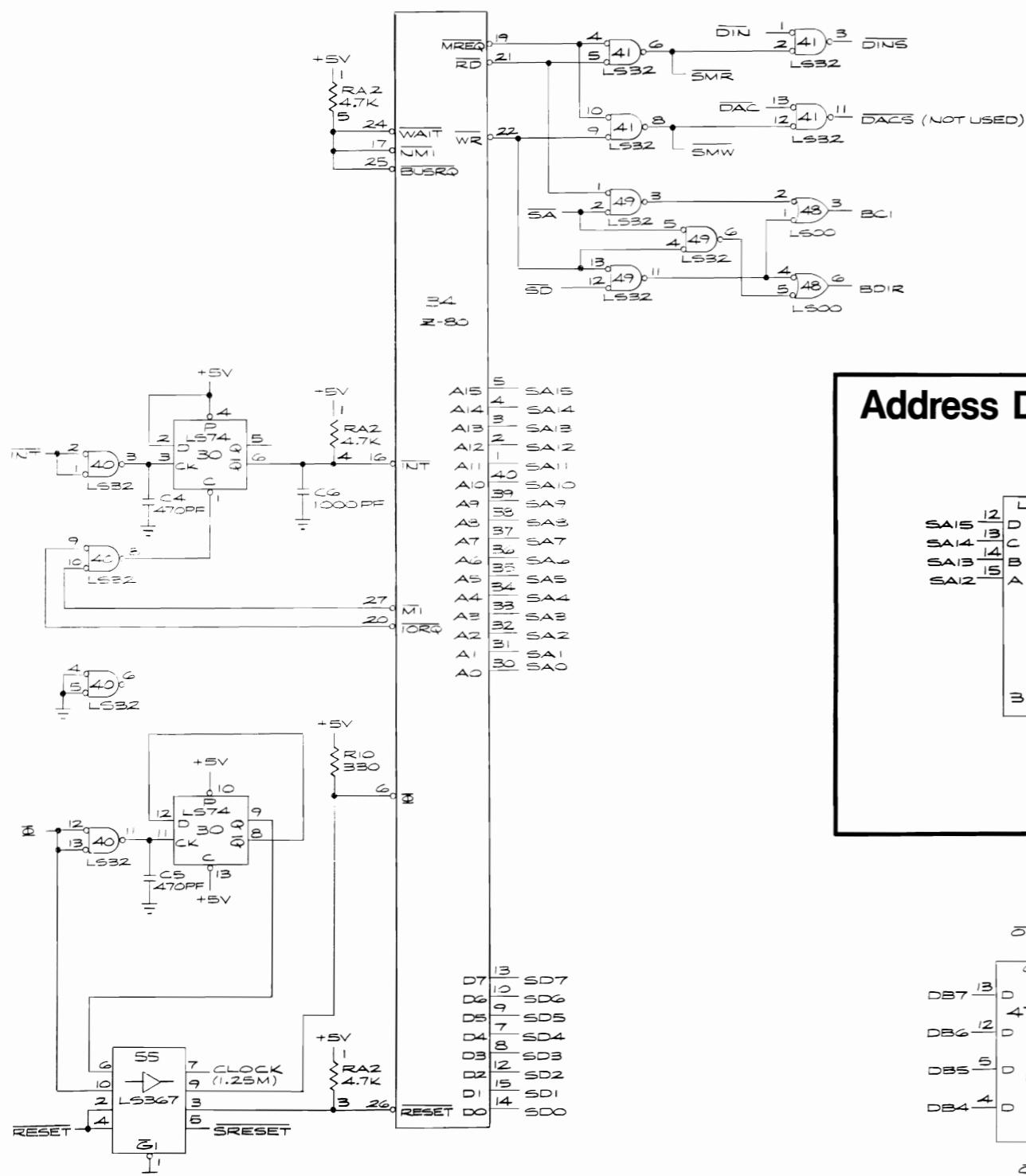


NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
 CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

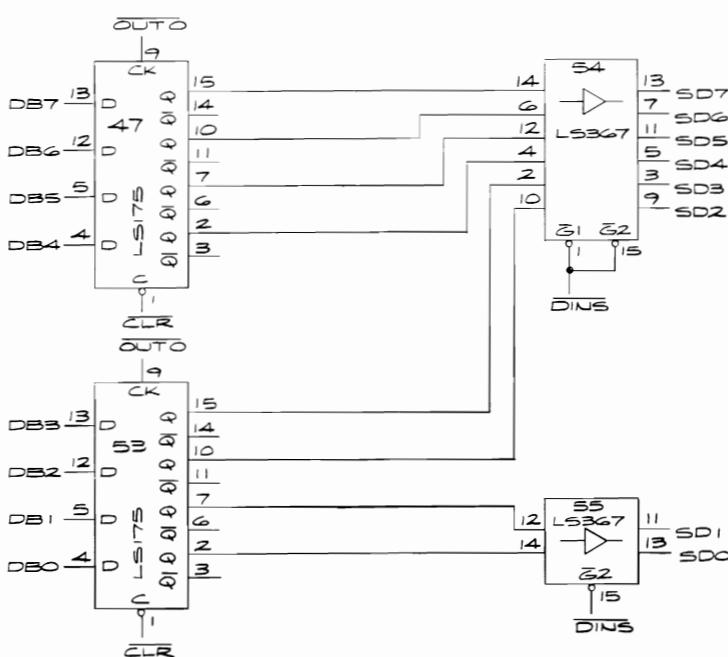
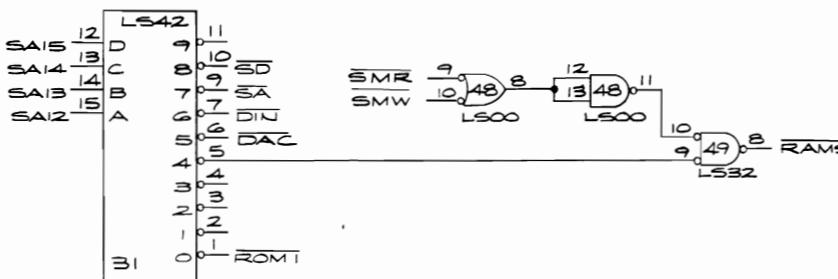


Kangaroo CPU PCB Schematic Diagram

Sound Microprocessor



Address Decoder

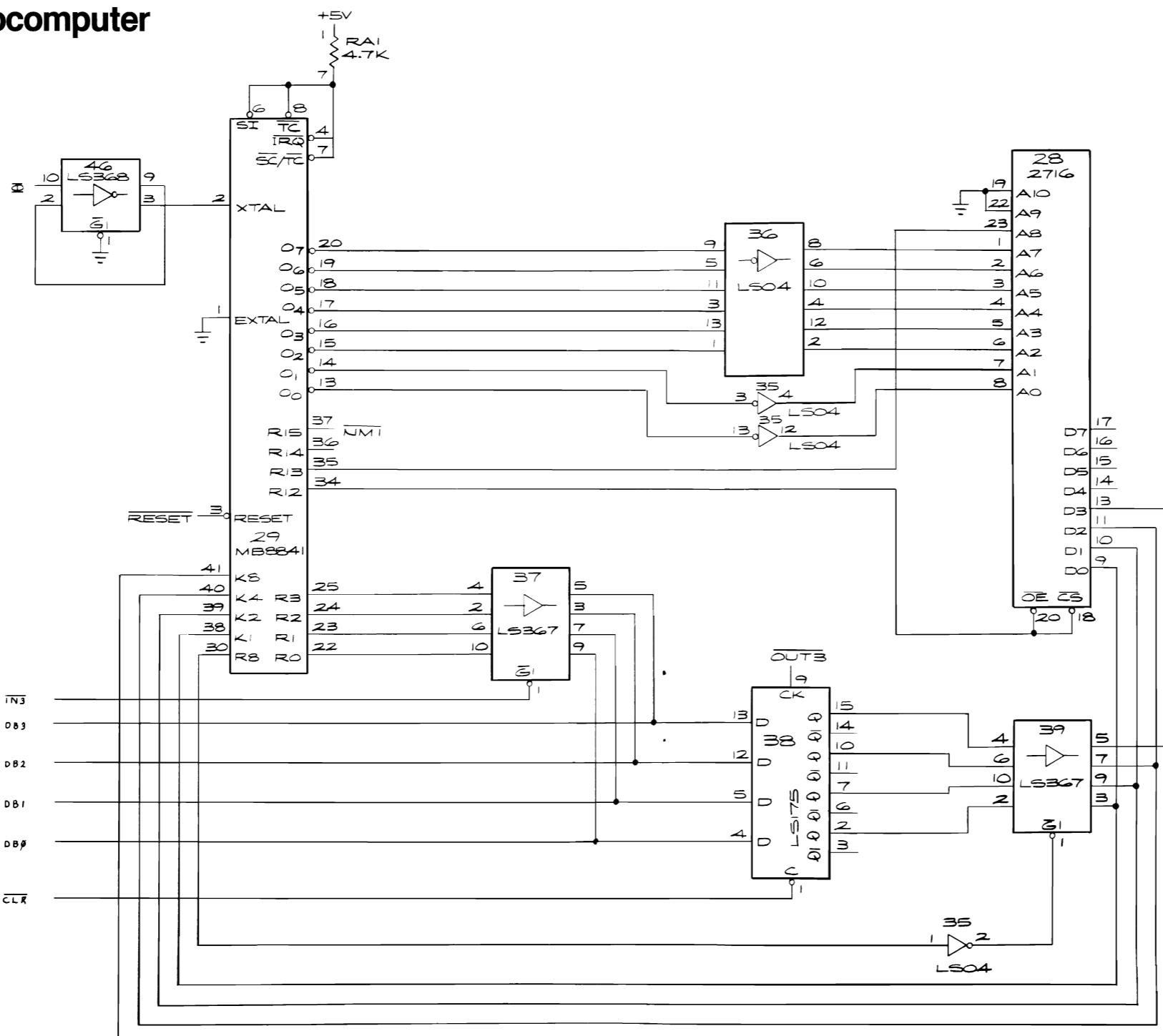


NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



Kangaroo CPU PCB Schematic Diagram

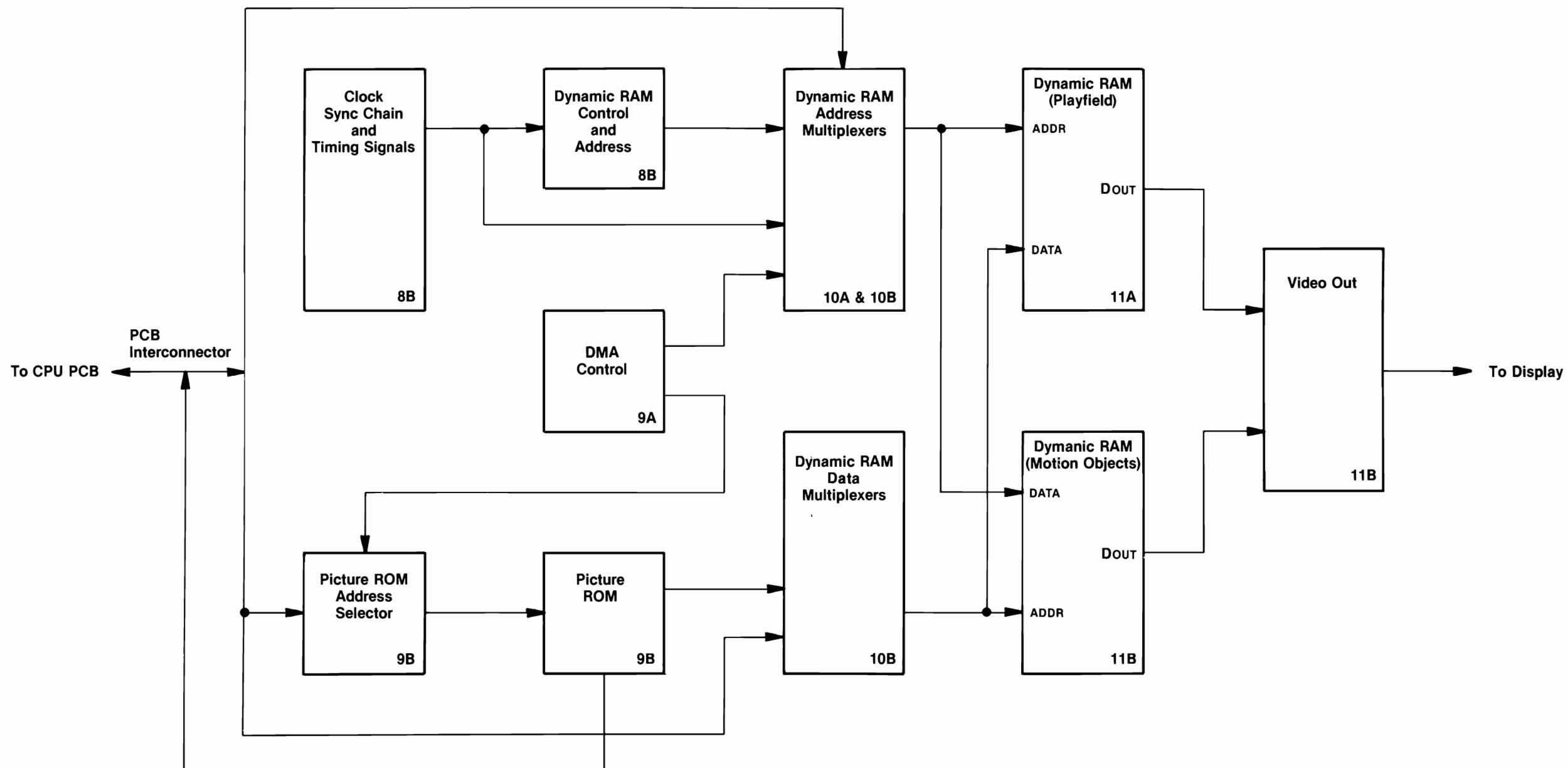
Custom Microcomputer



NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing, or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo CPU PCB Schematic Diagram

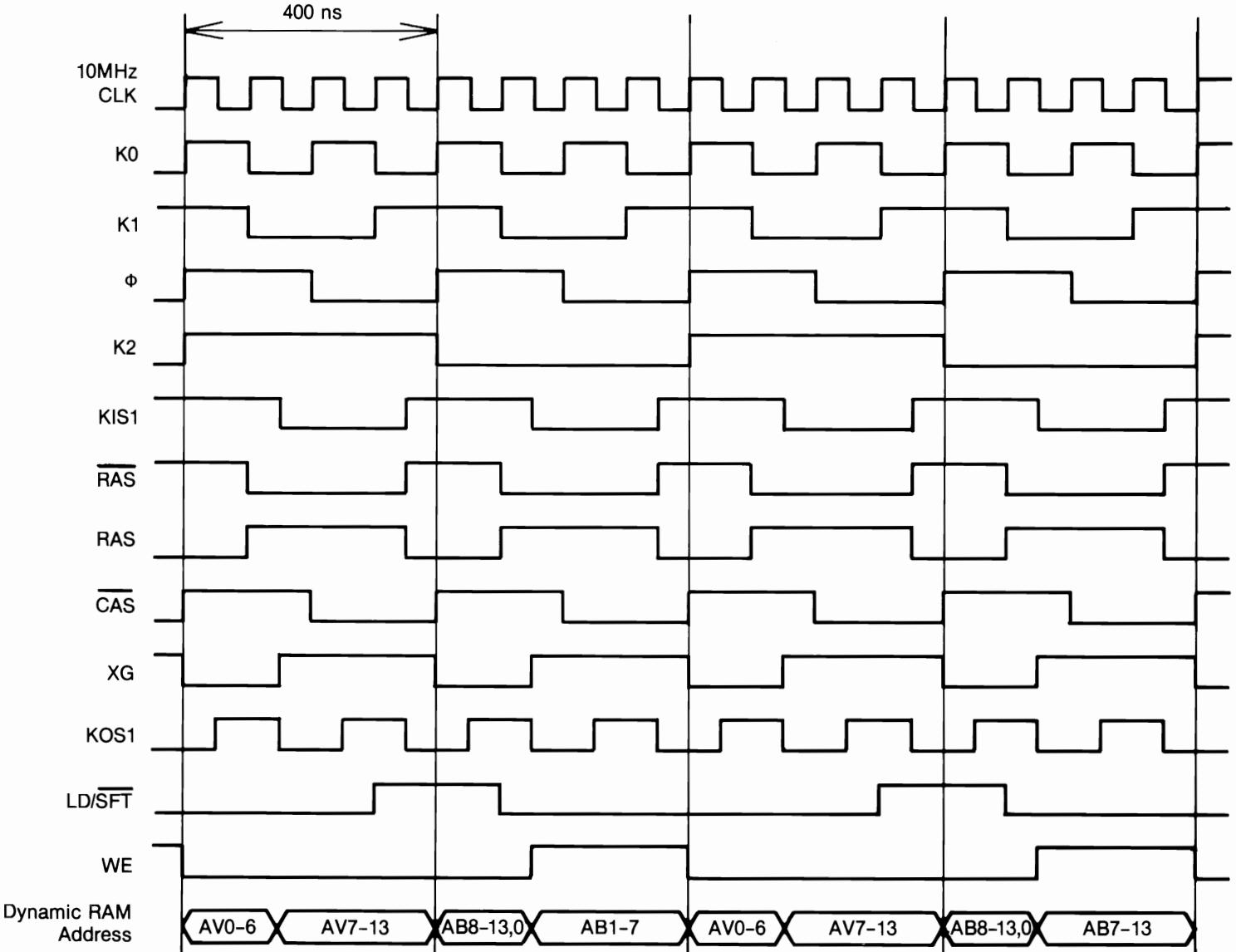
Block Diagram (Video PCB)



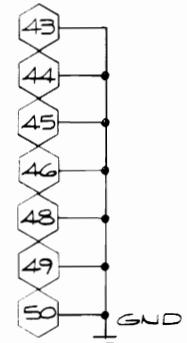
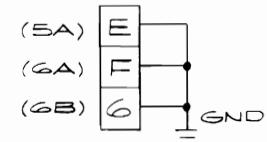
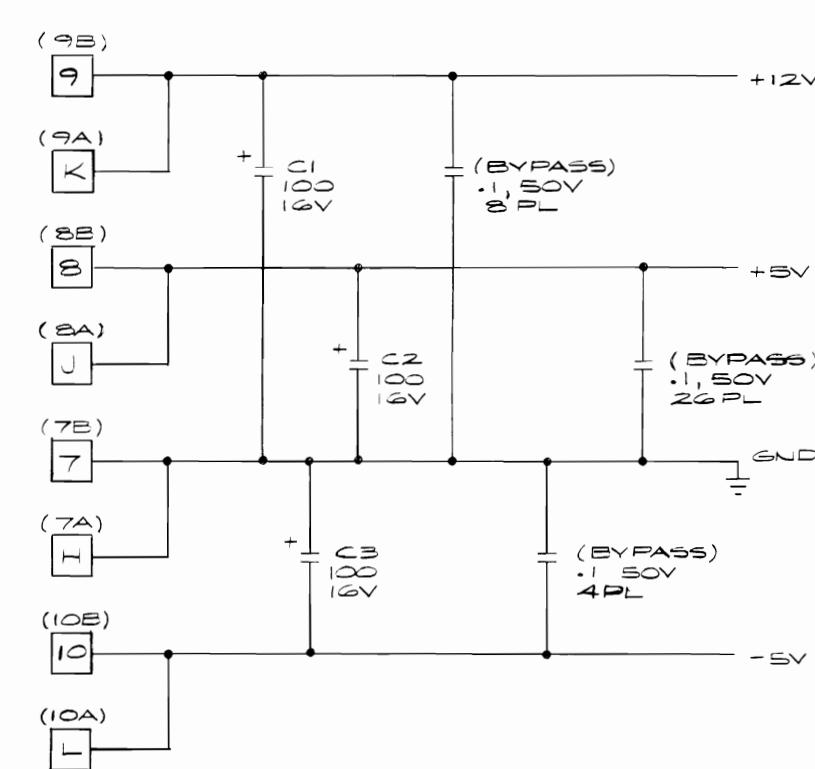
NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
 CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo Video PCB Schematic Diagram

Dynamic RAM Timing Diagram (Video PCB)



Video Power Input



NOTES:

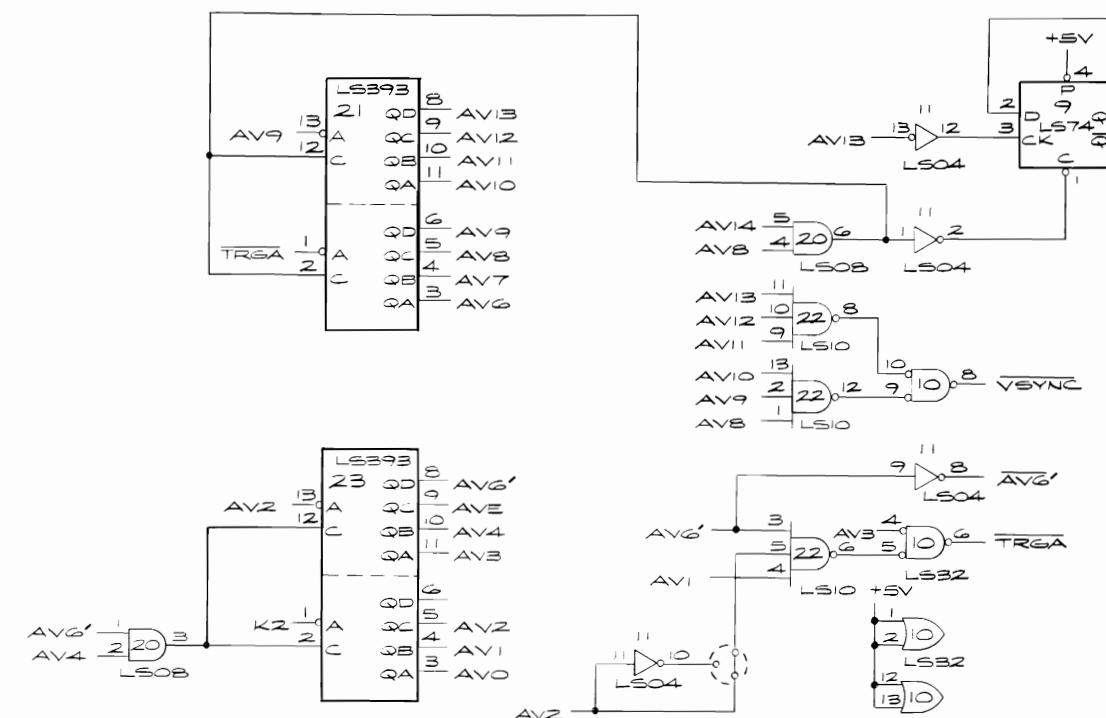
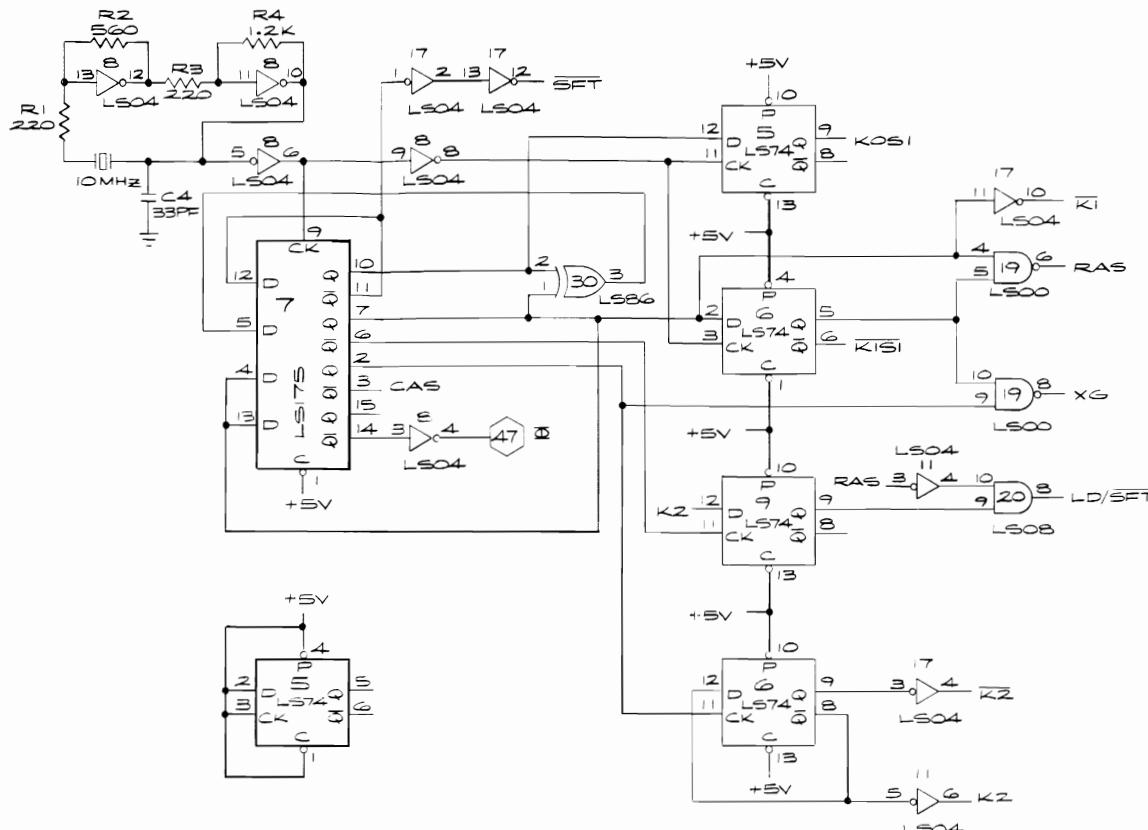
1. = CONNECTOR CN1
2. = CONNECTOR CN4



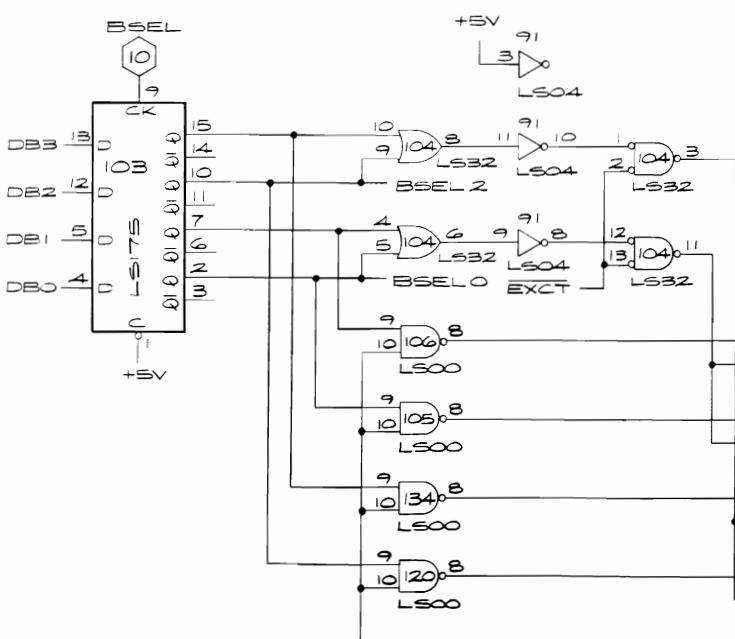
NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof conveys or transfers any right in, or license to use, the subject matter of the drawing, or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo Video PCB Schematic Diagram

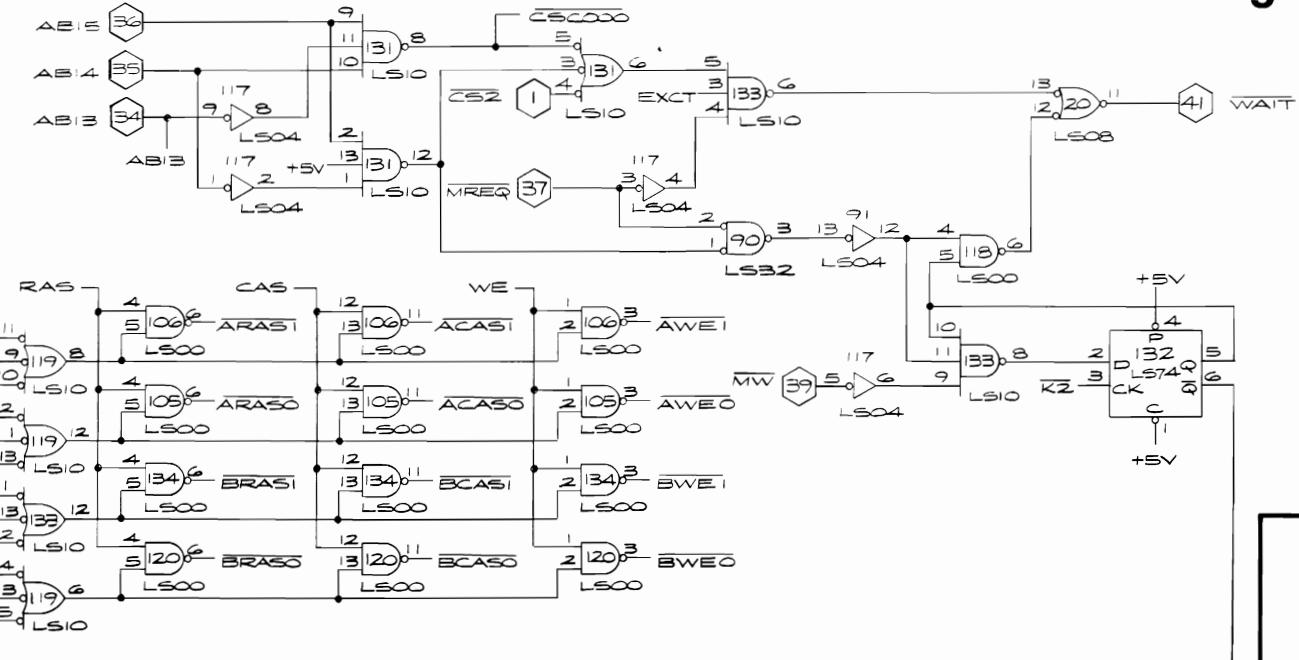
Clock, Sync Chain, and Timing Signals



Dynamic RAM Control



Address Decoding

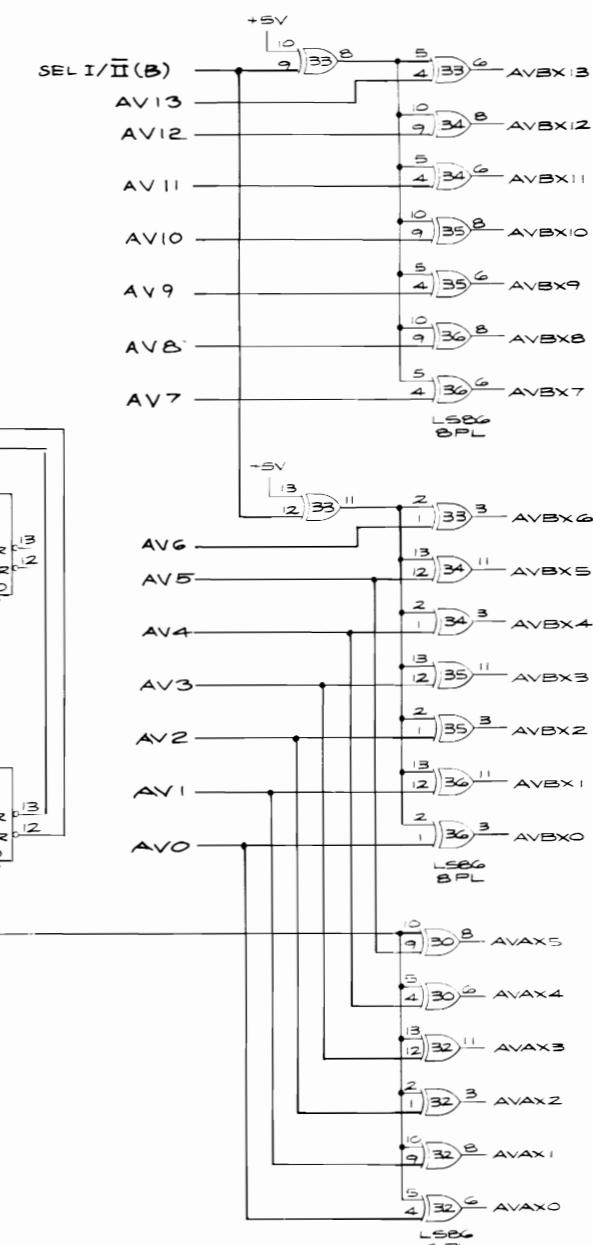
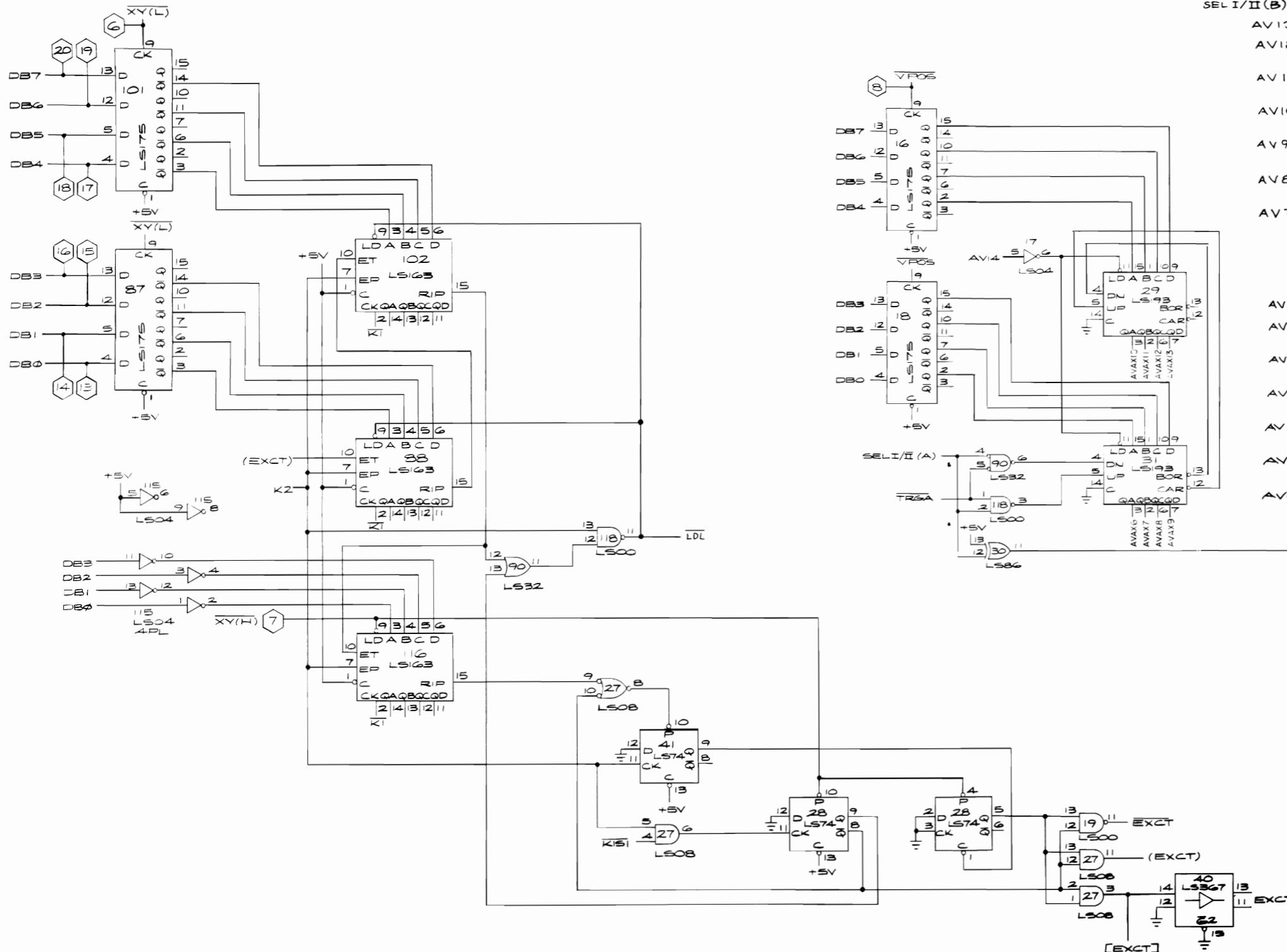


NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof conveys or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo Video PCB Schematic Diagram

DMA Control

Dynamic RAM Video Address and Flip

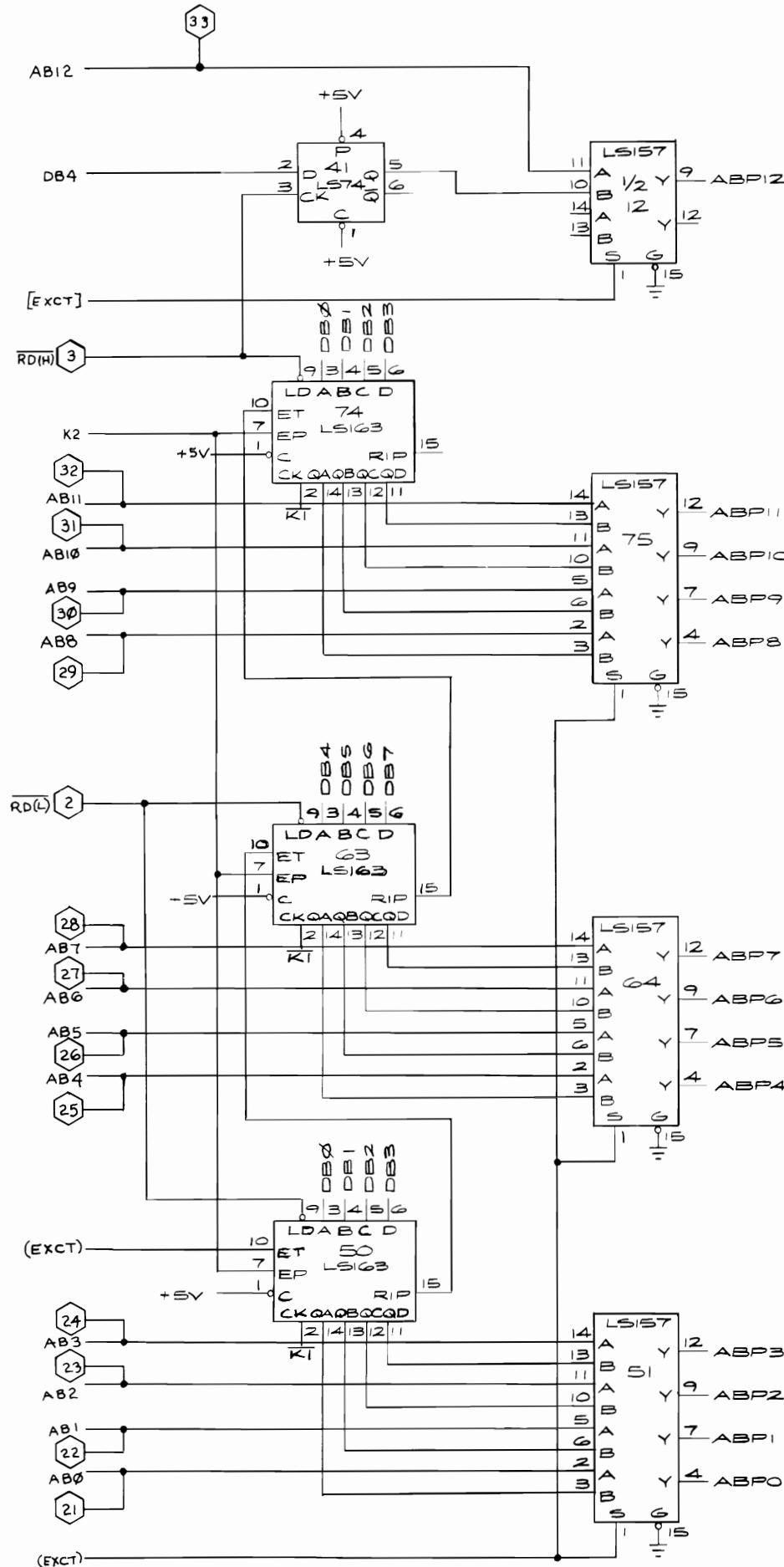


NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

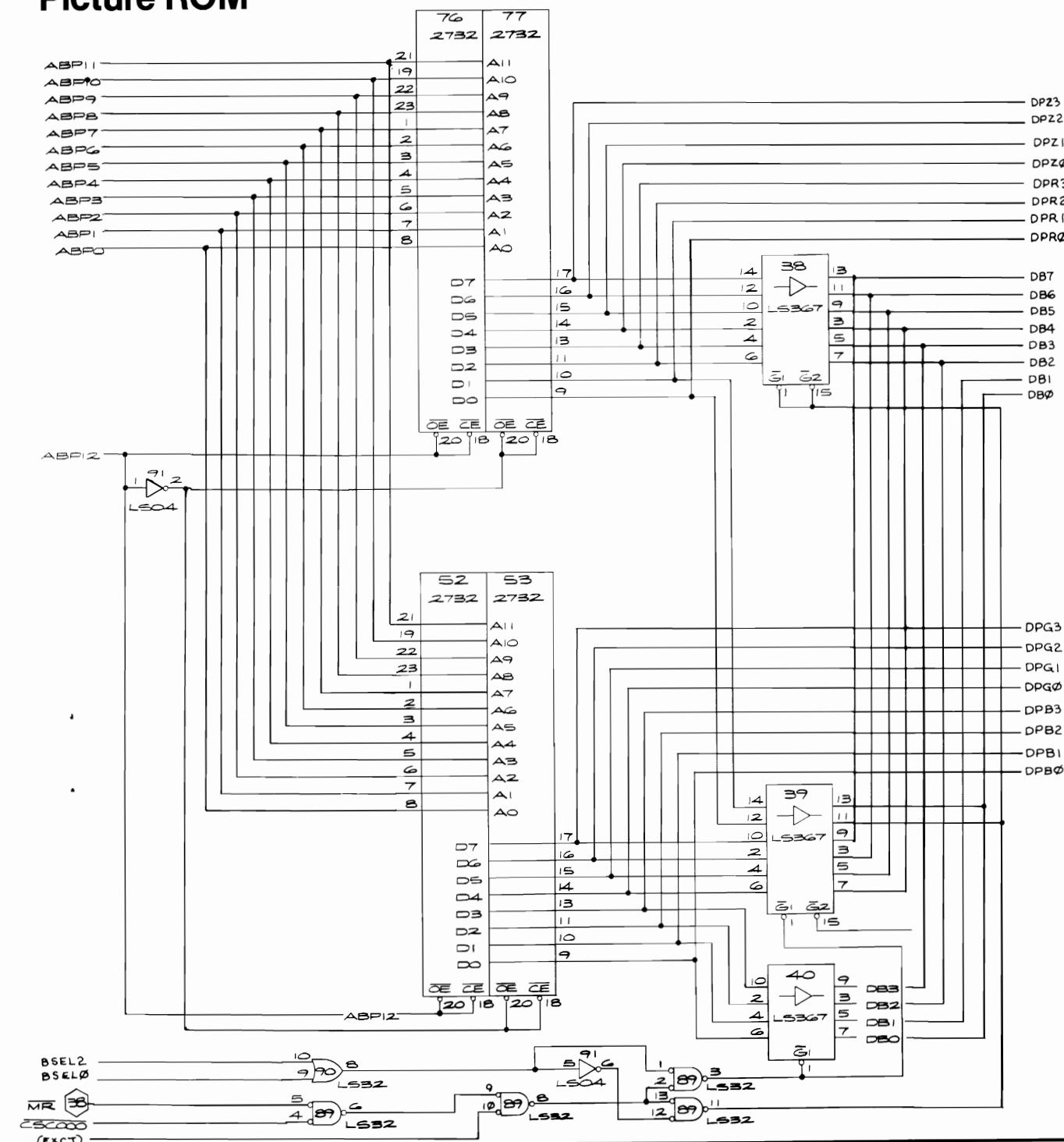
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo Video PCB Schematic Diagram

Picture ROM Address Selector



Picture ROM

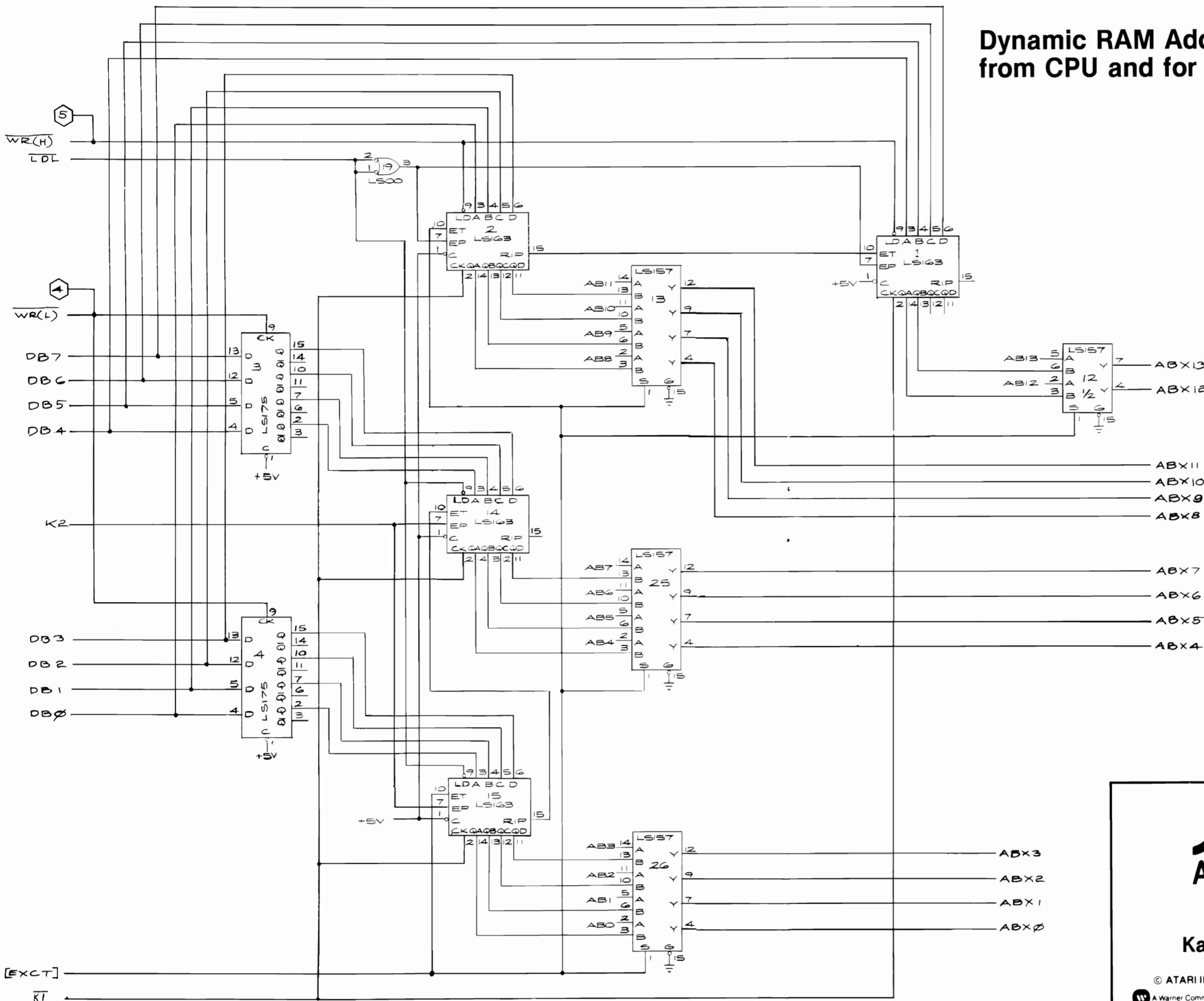


NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
 CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



Kangaroo Video PCB Schematic Diagram

Dynamic RAM Address from CPU and for DMA

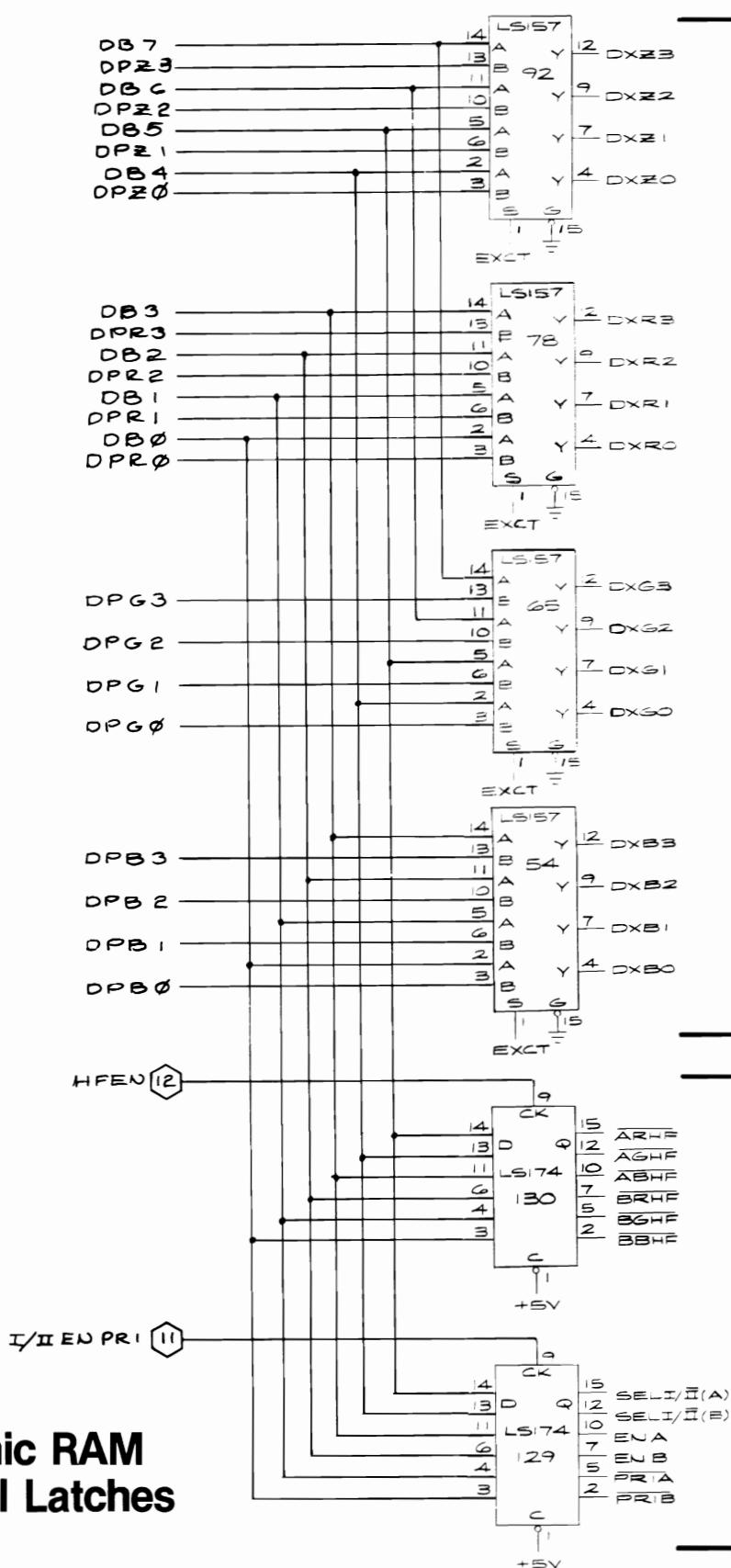


NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
 CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

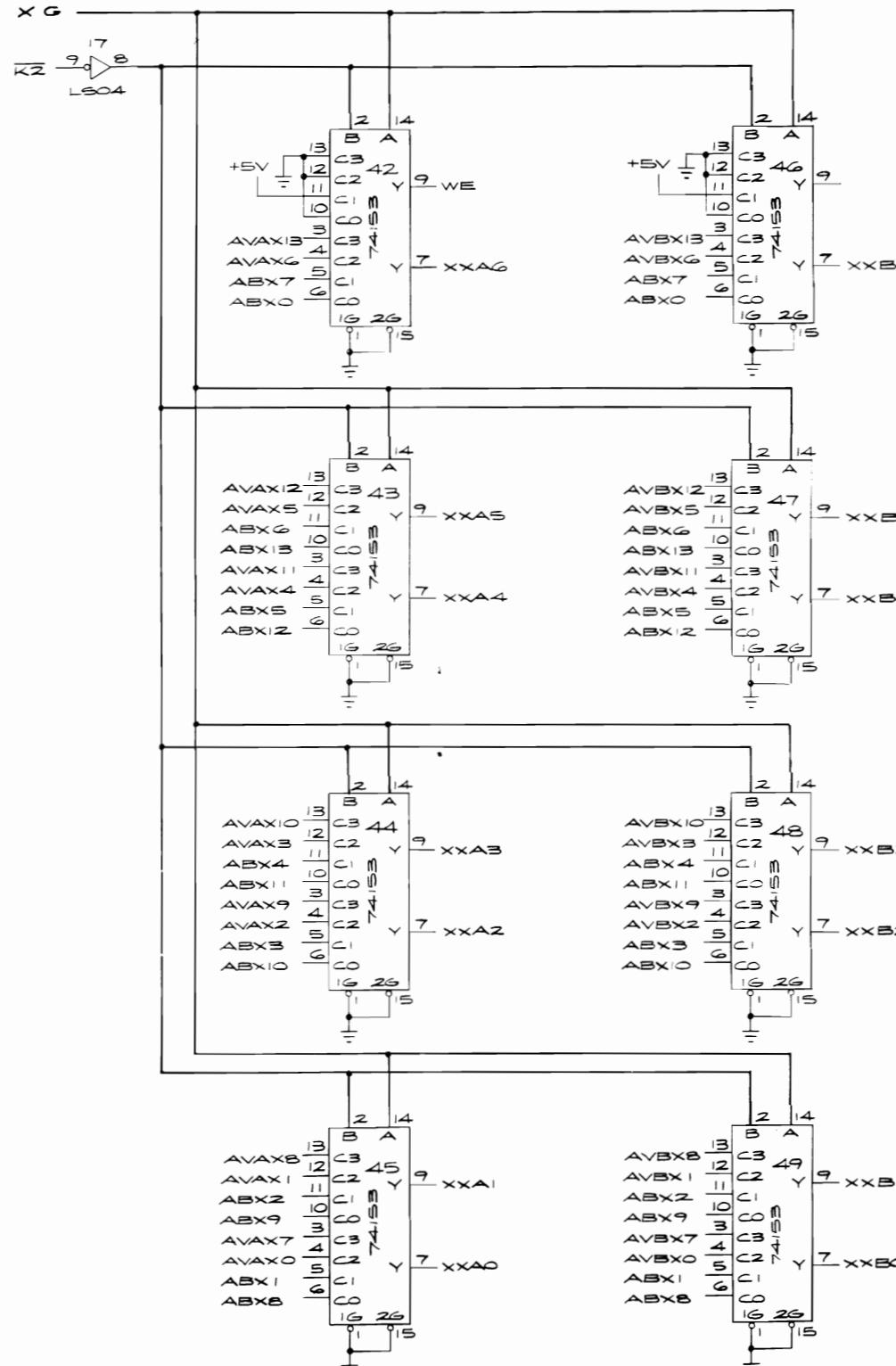


Kangaroo Video PCB Schematic Diagram

Dynamic RAM Data Selector



Dynamic RAM Address Selector



Dynamic RAM Control Latches

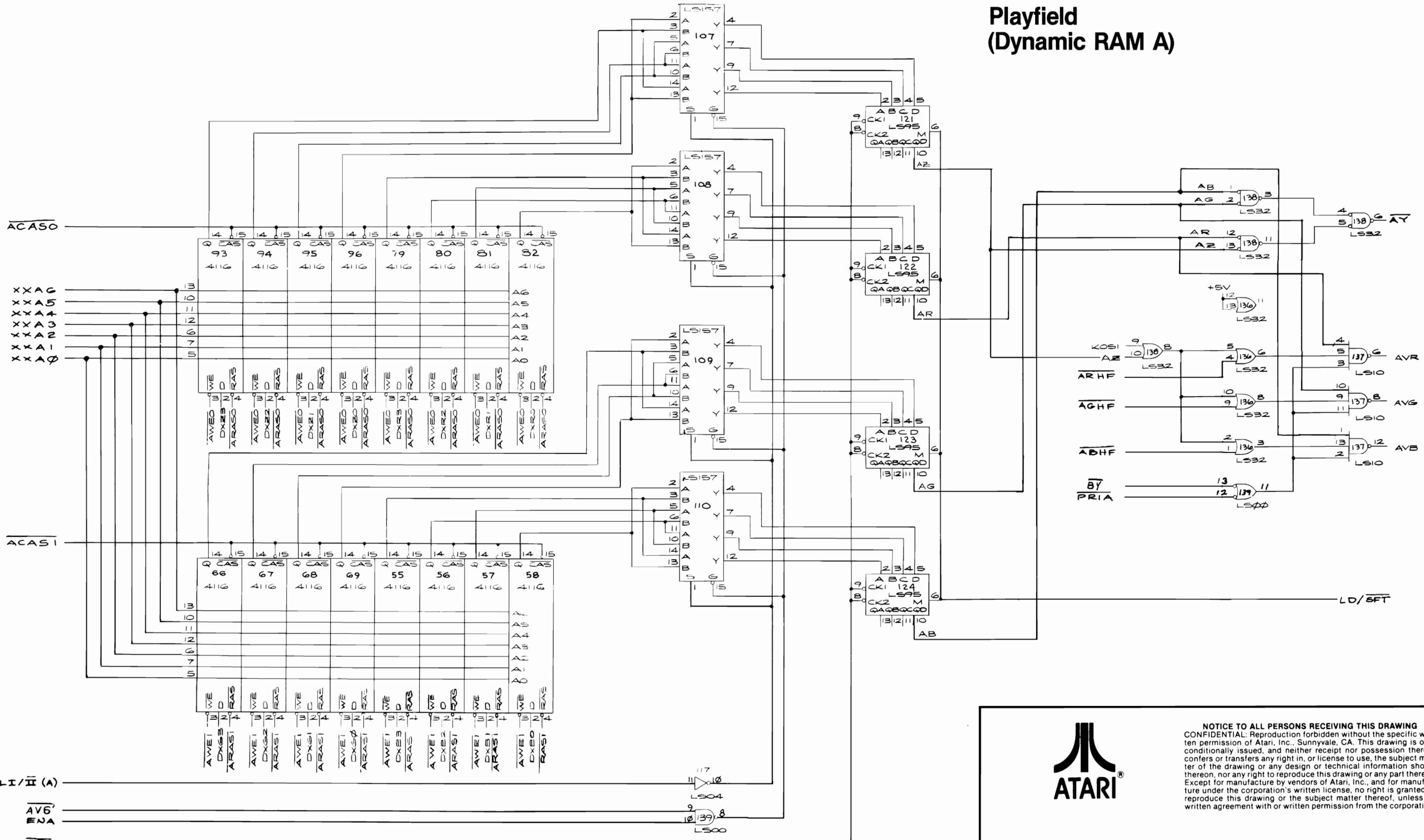


Kangaroo Video PCB Schematic Diagram

© ATARI INC., 1982
A Warner Communications Company

NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof conveys or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

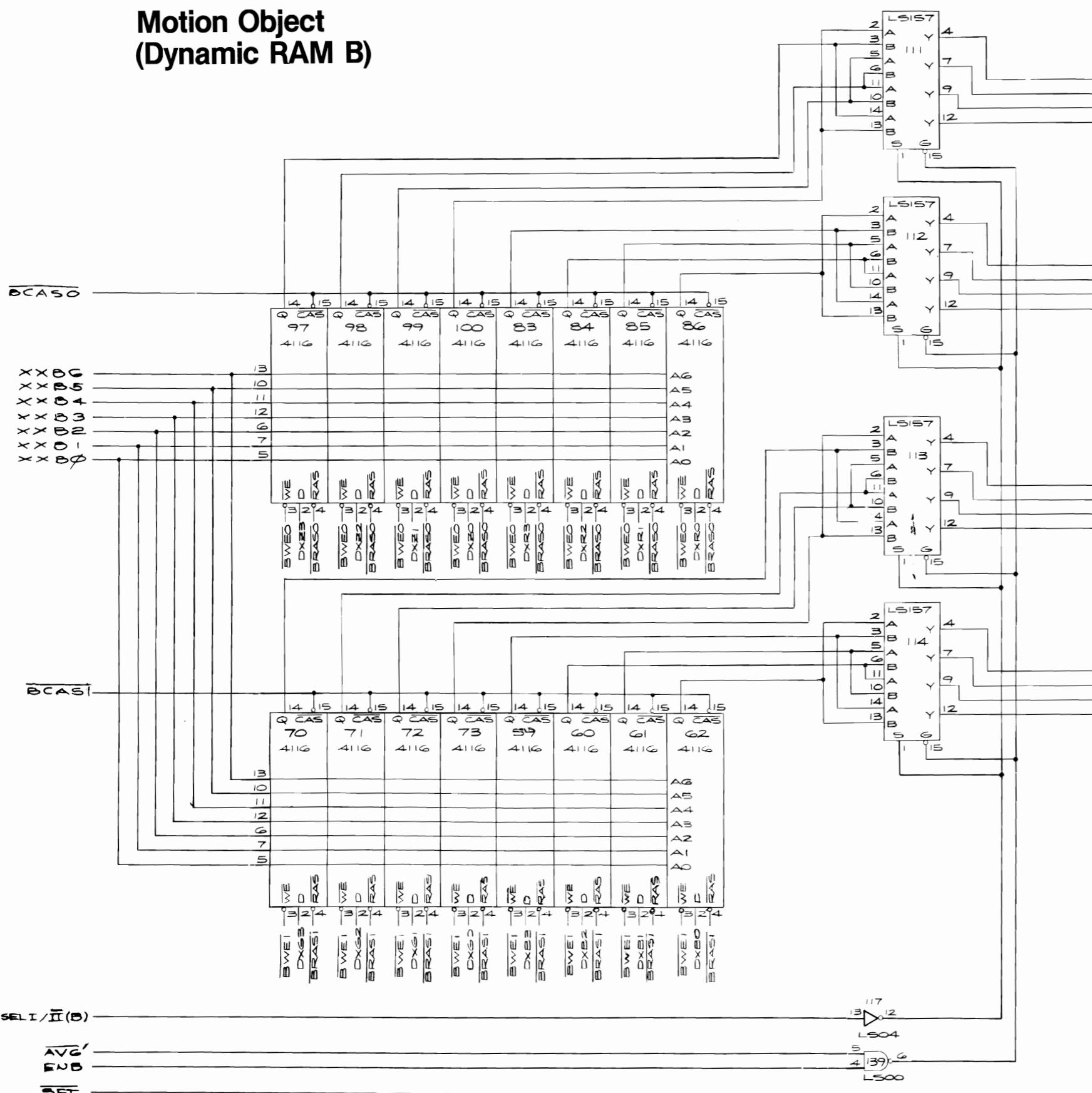
Playfield (Dynamic RAM A)



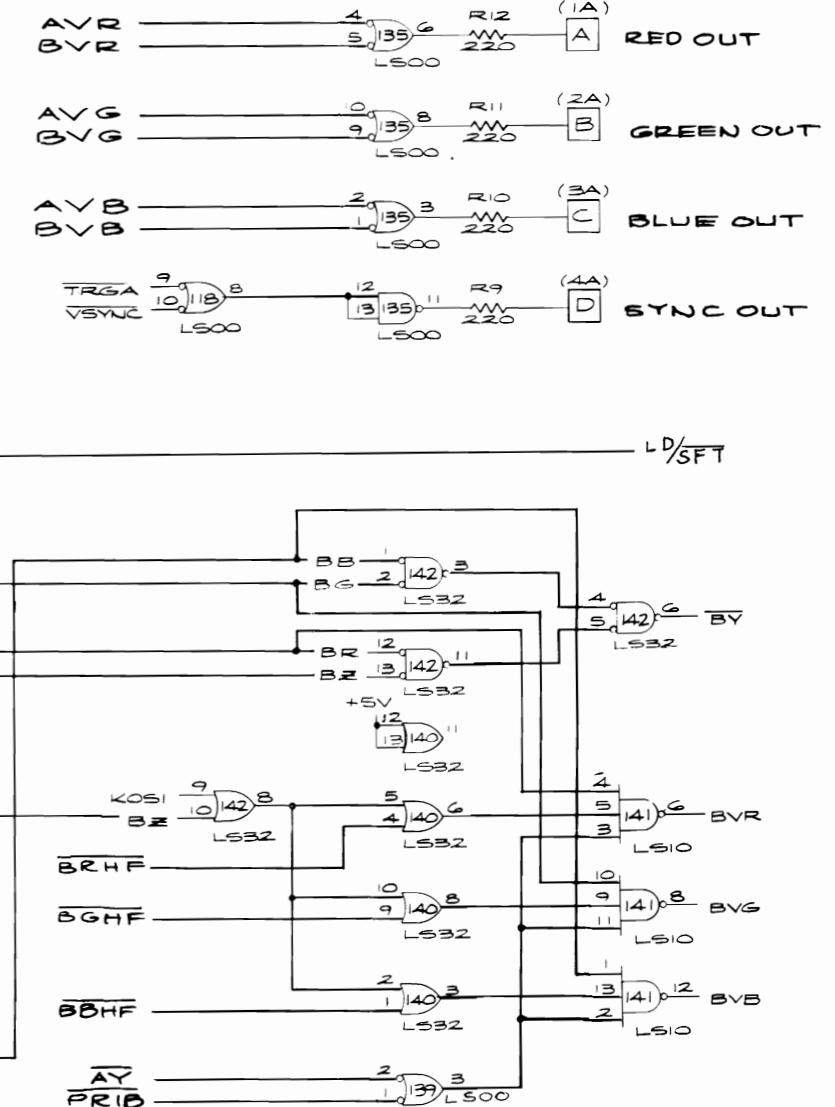
NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo Video PCB Schematic Diagram

Motion Object (Dynamic RAM B)



Video Output



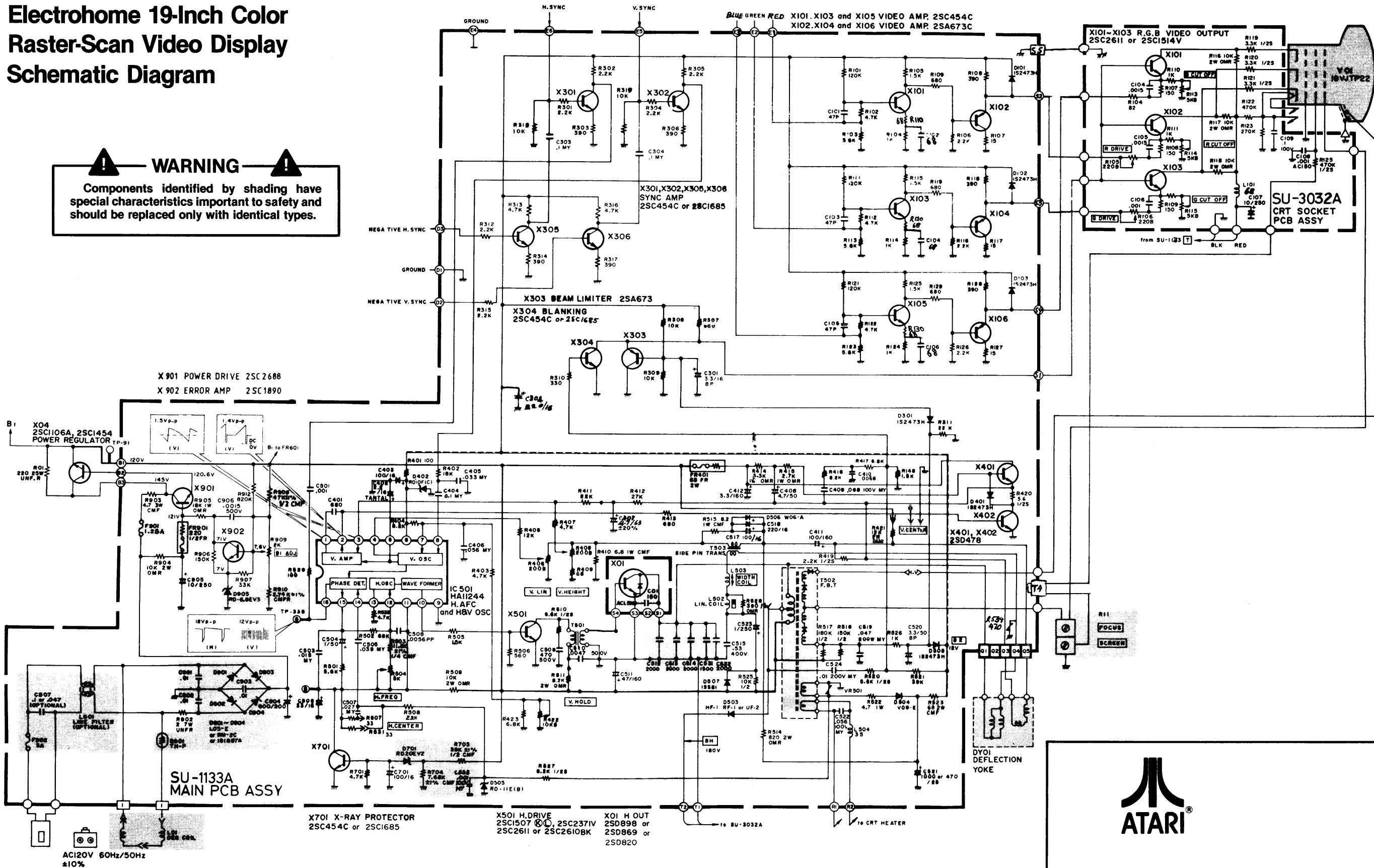
NOTICE TO ALL PERSONS RECEIVING THIS DRAWING
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari, Inc., Sunnyvale, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari, Inc., and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

Kangaroo Video PCB Schematic Diagram

Electrohome 19-Inch Color Raster-Scan Video Display Schematic Diagram

WARNING

Components identified by shading have special characteristics important to safety and should be replaced only with identical types.



Kangaroo Color Display Schematic Diagram